

**RESTORATION ALTERNATIVES PLAN  
FOR THE COEUR D'ALENE BASIN  
NATURAL RESOURCE DAMAGE ASSESSMENT**

Prepared for

The Natural Resource Trustees:

Coeur d'Alene Tribe  
United States Department of Agriculture  
United State Department of the Interior

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## APPENDIX A: SFCDR SOURCE INVENTORY

### SUMMARY

This appendix describes the methodology used to compile the inventory for the various source types in the SFCDR watershed: waste rock dumps, tailings (including floodplain contaminated sediments, mill sites, and tailings impoundments), and adits and seeps. The methodology is accompanied by the following tables. The quantities from these tables are summarized in the body of the report in Table 2.

#### Waste Rock Inventory

Table A-1. Canyon Creek waste rock dumps inventory (2 pages, oversize): In general, waste rock dumps have been identified for most of the adits in this sub-basin and associated with polygons in the Bureau of Land Management's GIS coverage (July 17, 1998, version). A large majority of the waste rock dumps identified in Canyon Creek have not been sampled nor have their volumes been measured. The largest volume estimate (500,000 cy) and highest concentrations of lead (up to 63,700 mg/kg), zinc (up to 25,800 mg/kg), and cadmium (up to 146 mg/kg) were identified at the Tamarack-Custer No. 7 waste rock dump (five samples).

Table A-2. Ninemile Creek waste rock dumps inventory (1 page, oversize): The information in available literature on the waste rock dumps in the Ninemile Creek sub-basin is limited. Waste rock piles have been verified for only a fraction of the known adits, and none of the piles has been characterized for metals content. Only one volume estimate was found, for a dump at the Tamarack-Custer (as much as 549,000 cy).

Table A-3. Pine Creek waste rock dumps inventory (2 pages, oversize): Because the East Fork Pine Creek has been the object of dedicated studies (particularly McNary, 1995), the information available on its waste rock dumps is more complete than for other subareas in the Basin. Waste rock dumps have been associated with almost all adits, and most have been sampled and their volume estimated. The rock dumps in the Main Stem of Pine Creek are not as well characterized. As might be expected, lead, zinc, and cadmium contents are generally high in waste rock from producing mines and lower in nonproducers. The highest volume (95,000 cy) and zinc and cadmium concentrations (up to 69,800 and 150 mg/kg, respectively, out of 34 samples) are found at the Red Cloud Mine; the highest lead concentrations (up to 97,600 mg/kg, out of five samples) are found at the Nabob 300 Level adit.

Table A-4. South Fork Coeur d'Alene River waste rock dumps inventory (3 pages, oversize): The volumes of waste rock piles in the area covered by the Bunker Hill Site have been estimated in Dames & Moore (1987, 1988), and about 15 samples were taken, each from different rock dumps. Few of the SFCDR waste rock piles have been characterized or surveyed outside that area. The largest volume estimated (260,000 cy), the highest zinc level (8,070 mg/kg), and the highest cadmium concentration (45.7 mg/kg) were associated with the Page Mine rock dump. The highest lead concentration came from the sample taken at the Silver Bowl rock dump (19,400 mg/kg).

#### Tailings Inventory

Table A-5. Canyon Creek tailings, mill sites, and impoundments inventory (1 page, oversize): Canyon Creek contains one impoundment and one repository (the Hecla-Star tailings ponds and the SVNRT repository), but they are some of the largest in the Basin (approximately 2,100,000 cy and 530,000 cy, respectively). Canyon Creek also contains 12 or more mill sites,

more than Ninemile Creek or Pine Creek. Canyon Creek has been the object of rehabilitation efforts by the SVNRT in several locations.

**Table A-6. Ninemile Creek tailings, mill sites, and impoundments inventory** (1 page, oversize): Ninemile Creek contains two impoundments, one repository, and one uncontrolled tailings pile, all of moderate size and situated on former mill sites. Ninemile Creek has also been the object of rehabilitation efforts by the SVNRT and Hecla Mining Company. The metals concentrations found in tailings from Ninemile Creek are relatively lower than in the other sub-basins.

**Table A-7. Pine Creek tailings, mill sites, and impoundments inventory** (1 page, oversize): Because of extensive studies conducted in the past (McNary, 1995; CCJM, 1998), the volumes and metals concentrations of tailings in the Pine Creek sub-basins are relatively well known. Unlike Canyon Creek and Ninemile Creek, where the bulk of the tailings, mill sites, and impoundments are found along the sub-basin's main stream, many of the sources in the Pine Creek area are found on tributaries, particularly Highland, Denver, Red Cloud, and Nabob Creeks. Tailings piles at the Douglas, Liberal-King, and Amy-Matchless mill sites, as well as along some riparian areas, have been the object of remediation efforts by BLM.

**Table A-8. South Fork Coeur d'Alene River tailings, mill sites, and impoundments inventory** (2 pages, oversize): Because tailings have been transported to riparian and floodplain areas from upstream, the characteristics of deposits throughout the SFCDR vary widely. Several large impoundments are situated directly over historic floodplains known to contain deposits of sediment mixed with tailings, up to thicknesses of several feet. In addition, the Bunker Hill Superfund Site is the object of intensive remediation efforts; in particular, an ongoing effort in Government, Milo, Magnet, and Deadwood gulches makes it difficult to assess volumes. For this reason, the inventory did not include volumes and concentrations for these areas, which are expected to be remediated under the CERCLA process.

**Table A-9. Osburn Tailings Ponds Inventory** (1 page): This inventory constitutes a detailed breakdown of the volumes reported in the literature as having been placed in the Osburn tailings ponds.

**Table A-10. CIA volume inventory** (1 page): This inventory constitutes a detailed breakdown of the volumes reported in the literature as having been placed in the CIA.

#### **Adit and Seep Inventory**

**Table A-11. Adits compilation for Canyon Creek, Ninemile Creek, Pine Creek, and South Fork Coeur d'Alene River** (5 pages, oversize): Most adits with drainage that have been the object of sampling efforts have flows under 1 cubic foot per second (cfs) and relatively low concentrations of metals: total and dissolved lead on the order of  $10^1 \mu\text{g}/\text{L}$  or less, dissolved zinc on the order of  $10^3 \mu\text{g}/\text{L}$  or less, and dissolved cadmium on the order of  $10^1 \mu\text{g}/\text{L}$  or less. These are considered low to moderate contributors to the metals loading in the Basin.

Major exceptions are the Gem No. 3 adit and the Kellogg Tunnel, which display both higher flows and higher metals concentrations. A few adits exhibit high metals concentrations but low flows (Success No. 3, Sunset Tunnel, Nevada-Stewart, Nabob 1300 Level, Sidney-Red Cloud, Little Pittsburgh, Idaho Prospect, and Lynch), while a few others show flows above 1 cfs but moderate metals concentrations (Tamarack No. 7, Hercules No. 5, and Snowstorm No. 3).

**Table A-12. Adits inventory for Canyon Creek, Ninemile Creek, Pine Creek, and South Fork**

**Coeur d'Alene River (7 pages):** This inventory includes those mines that have recorded ore production and mines with discharging adits, whether they were producers or not. Adits associated with producing mines are the most likely to have metals in any discharge. This compilation does not constitute a complete inventory of all adits in the SFCDR watershed, because mines with no recorded ore production are not included unless they have discharging adits. However, an estimate of the total number of adits in the SFCDR watershed is provided in Table 2, based on mapping by Hobbs et al. (1965); McNary et al. (1995); Kaufmann et al. (1999a, 1999b). The inventory is organized from upstream to downstream for each sub-basin. If a mine has recorded ore production or observed drainage, the number of adits believed to be associated with the mine, the number of adits known to discharge, and the number of discharging adits known to have water quality sampling are tabulated. The number of discharging adits is considered to be a minimum, as not all adits in the watershed have been field-checked.

**Table A-13. Seeps compilation for Canyon Creek, Ninemile Creek, Pine Creek, and South Fork**

**Coeur d'Alene River (1 page, oversize):** It is probable that only a small fraction of the seeps in the Basin have been identified. Those that have been sampled and reported in the literature generally have low flows, although their metals concentrations are generally relatively higher than those of adit drainage. Seeps that are identified as coming from waste rock have the lowest metals concentrations, and those identified as coming from tailings have the highest (three orders of magnitude higher on average).

## METHODOLOGIES

### WASTE ROCK

**Locations:** In general, waste rock piles are found close to mine adits. The list of mines and workings prepared for the NRDA Draft Restoration Plan Part A was used as a starting point for the inventory, and a literature review was performed. Unless a reference was discovered in the literature that specifically stated that no waste rock was found on site, those locations were listed in the inventory. Where the information was known, mine locations were noted as producers and nonproducers.

**Concentrations:** Sampling locations and analytical results were obtained from literature, and the number of samples and references for the sampling information were indicated for each location.

**Type:** Whenever the information could be located, the type of material (whether the rock was homogeneous or mixed with tailings) was indicated for each source.

**Dimensions:** When the literature revealed that a physical study or survey of the location had been performed, this information was used. The second source of information for physical dimensions was the BLM Source Maps (July 17, 1998, version); the areas for polygons identified as rock dumps in the database were used when no on-site information was available.

**Volume Estimates:** The volumes of waste rock dumps are generally difficult to establish because of accessibility and/or the piles' geometry. For this reason, limited volume data are available. Typically, they are located on the face of steep slopes, have uneven thicknesses throughout, and roughly prismoid shapes. Most piles' volumes have not been measured and/or calculated in literature. The following procedure was used to produce a Basin-wide estimate:

- List all locations where both the volume and area of the rock dumps were known, and calculate the corresponding average thickness.
- 12. List all locations for which the area of the rock dumps was known, and calculate the corresponding average area.
- 13. For each location where only the area or only the volume of the rock dumps was known, calculate the missing value using the average thickness calculated in Step 1.
- 14. For each location where a rock dump was identified but no area or volume was available, assume the average depth calculated in Step 1 and the average area calculated in Step 2 to calculate the expected volume.
- 15. Add all the volumes obtained for each reach.

**Ground Water and Surface Water Interaction Potential:** The potential for ground water or surface water interaction, when found in the literature, was divided in three types: adit discharge entering the rock pile, seeps from the pile, and surface water eroding the rock dump.

**Physical Instability:** When the literature revealed that the pile had shown signs of physical instability, this was also noted in the inventory.

## TAILINGS

- **Locations and areas:** Because of the amount of information they condense, and of the common reference they offer, BLM Source Maps (July 17, 1998, version) were used as the primary reference for identifying tailings in the South Fork of the Coeur d'Alene Basin. Areas from BLM polygons were used whenever possible. Additional polygons were designated for locations known to be impacted but not covered by BLM polygons. The areas for those additional locations were estimated.
  1. Old Rex Mill, a.k.a. Old Custer Mill (Ninemile Creek)
  2. Granite Mill (Canyon Creek, just above west end of polygon BUR143)
  3. Kellogg impacted floodplain (South Fork Coeur d'Alene)
- **Volume:** Whenever possible, the most recent volume information from literature or a personal communication with a knowledgeable person was used. When no specific data were available, volumes were estimated by assuming thickness ranges (minimum and maximum average thickness) throughout the polygon.
- **Concentrations:** Sampling locations and analytical results were obtained from literature and attached to specific BLM polygons. The number of samples and references for the sampling information were indicated for each polygon.
- **Type:** Whenever the information could be located, the type of tailings (jig or flotation) was indicated for each source. In addition, a few locations were identified as containing waste rock mixed with tailings, and some were designated as "artificial fill." Artificial fill refers to alluvium mixed with tailings that was later used as construction material.
- **Location in Floodplain:** Five types of locations were identified. Materials from a given polygon could be located in more than one such location; for example, a mill site can be located in the historic floodplain.

**Bed:** Area of the stream covered by water at least part of the year.

**Banks:** Channel sides and areas immediately adjacent to the stream and unprotected by levees, berms, or embankments.

*Historic floodplain:* Because of hydrological changes in the Basin over the past 120 years, such as changes in bed load due to in-stream tailings disposal, construction and subsequent failure or demolition of dams, stream channelization, and road embankment construction, the location and extent of the floodplains of the South Fork Coeur d'Alene River have varied significantly.

Using historical photographs, locations that at the beginning of the century acted as floodplains and received sediment contaminated by jig tailings, but that are no longer acting as floodplains, have been identified (Box 1996; Box, 1999).

*Impoundments:* The word "impoundments" was used to describe discrete, man-made accumulations of tailings such as piles or ponds, whether engineered or not, as opposed to dispersed riparian and floodplain tailings that accumulate from stream action.

*Mill sites:* Mill sites are known to generally contain higher concentrations of contamination as the result of spills of concentrate, chemical processing solutions, and tailings.

- Characteristics: Characteristics related to ground water and surface water interaction potential, transport potential, and mixing with sediments were obtained from literature and/or maps.

Tailings were grouped into four categories based on the type of restoration effort they would involve. These categories are:

### Floodplain and Riparian Tailings

- This refers to tailings mixed with stream sediment and alluvium due to stream action. These locations were primarily identified from BLM polygons designated as "Riparian impacted areas" or "Floodplain impacted areas," as well as from historical photographs and the preliminary work by Steve Box, USGS (Box, 1996).
- In general, there were analytical data to characterize the ranges of concentrations for the metals of concern (cadmium, lead, and zinc), but limited information on volumes; average thicknesses were assumed for the studied areas.

### Mill Sites

- As mentioned above, mills are of particular concern because of the elevated levels of contamination found in their immediate vicinity.
- The locations of historic mill sites were obtained from BLM polygons, from SAIC 1993, from Keith Long's inventories, from sections of NRDA Draft Restoration Plan Part A, and from the literature. Many of these mills no longer exist, and some cannot be located with complete certitude. More commonly, the locations of older mills (particularly jig mills) are now occupied by more recent facilities.
- The volumes of contaminated materials are generally poorly known for mill sites; however, it is reasonable to assume that at least the first 6 to 12 inches of soil in and around the mills will show significant levels of metals, extending up to several feet in depth. Where mill site soils have been sampled, the results generally confirm this assumption.

## Impoundments

- The locations of impoundments were obtained from BLM polygons and from the literature.
- The volume of tailings in impoundments is generally better known than those of other sources. In several cases, however, the volumes of active repositories had to be estimated from literature and from knowledgeable sources (Dames & Moore, 1990; SAIC, 1993; McNary, 1995; CCJM, 1998; SVNRT, 1998; Fortier, 1999; Calabretta, 1999) by adding the volumes received over recent years. In particular, the Bunker Hill Central Impoundment Area (CIA) is estimated in a separate spreadsheet.
- Concentrations of contaminants in impoundments are highly variable due to the heterogeneous nature of the materials they may contain.

## Remediated Areas

- Remediated areas include locations that until recently were considered sources, particularly riparian and floodplain impacted areas, but have been the object of removal efforts. In most cases, it is too early to assess whether the effort was entirely successful or whether those locations will need further remediation.
- In general, no volumes have been attributed to those locations, as it is hoped that they no longer are sources of contamination.
- When recent sampling rounds had taken place in areas that had received remediation efforts, the ranges of results were included.

## ADITS AND SEEPS

Each row in the adit compilation table and the seep compilation table represents a sampling event associated with a specific adit or seep. Some adits and seeps have been sampled more than once.

- **Data Source:** Sources of information for the adit and seep data compilations included publications, reports, and agency databases. Complete citations are included in Section VI. All known analyses of adit discharge and seeps are included, with the exception of the Kellogg Tunnel.
- **Agency:** The affiliated agency is listed for each data source.
- **Adit/Seep Name:** The name of the adit or seep is associated with each sampling event. The name generally identifies the associated facility or location. Exceptions: The Hidden Treasure adit is believed to be associated with several mines, including the Tiger-Poorman, the Sherman, and the Union; the Kellogg Tunnel is associated with the Bunker Hill mine; the Hooper Tunnel is associated with the Crescent Mine.
- **Type (Seeps only):** If available in the data source, the source type of seep is tabulated, e.g., waste rock (includes "dump"), tailings, NPDES (permitted discharge), spring, floodplain.
- **Other ID:** In some data sources, adits and seeps may have additional identifiers other than their names. These identifiers are tabulated when available.

- **Reach** (Adits only): The associated geographic subarea, as discussed in Section II.A., is tabulated for each adit.
- **Sample Date**: The date associated with each sampling event is included. For some sampling events, only the month is identified.
- **Flow** (Adits only): Available flow data associated with a metals sampling event are included. Flows are reported in the table as cubic feet per second (cfs). Flows reported in data sources as gallons per minute or liters per second were converted to cfs.
- **Hardness**: Hardness is represented as mg/L CaCO<sub>3</sub> equivalent. For those sources not reporting hardness, the parameter was calculated using dissolved calcium and magnesium, if reported. The calculation was performed using the equation: Hardness = 2.497 (Ca mg/L) + 4.116 (Mg mg/L).
- **Metals**: Analytical results for dissolved and total cadmium, lead, zinc, and iron are tabulated. The suffixes \_D and \_T represent dissolved and total, respectively. All results are tabulated as micrograms per liter ( $\mu\text{g}/\text{L}$ ), regardless of how they were reported in the data source (e.g., mg/L, ppm, ppb). Data qualifiers are tabulated for each metal, if reported in the data source. The qualifier "U" indicates the parameter was not detected above the level of the associated value and can be read as "less than." If the data source reported a result using the symbol "<" to mean "less than," a "U" was substituted. If the data source did not indicate a numeric value for a nondetect, "ND" is included in the value field. Other qualifiers encountered include "J" and "UJ." The "J" qualifier indicates the associated value is an estimated quantity; the "UJ" qualifier indicates the associated value was not detected above the level of the associated value, which is an estimate.
- **Alkalinity/Sulfate**: Analytical results for alkalinity and sulfate are tabulated and represent total forms of the anions. All results are tabulated as micrograms per liter ( $\mu\text{g}/\text{L}$ ), regardless of how they were reported in the data source (e.g., mg/L, ppm, ppb). In some instances the total form is not reported; if the dissolved form is available, the latter is tabulated. Use of dissolved data is documented in cell notes embedded in the source spreadsheet for the table. As with metals, data qualifiers are reported if available.
- **pH**: pH is tabulated if available.
- **Temperature**: Temperature is tabulated if available and is presented in degrees Celsius (°C).

Table A-1 Rev. 1 Canyon Creek Waste Rock Dump Inventory.												Type (#)		**Volumes estimated from BLM field work mapping, X-Waste dump was noted, no volume.													
Reach	Tributary	Polygon Number	Location	# of Samples	Concentration (mg/kg)			Type	Volume** (c.yd)	Est. volume (c.yd)	Area* (acres)	Est. Area (acres)	Depth (ft)	GW/SW interaction	Seep sampled	Physical in-stability	Reference	Comments									
					Zinc	Lead	Cadmium																				
					H: Homogeneous	M: Mixed with tailings	(#), number of dumps																				
<b>Upper Canyon Creek</b>																											
CC-6	Canyon Creek	BUR107	Ajax No.3						138,900	138,900	2.34	2.34													SAIC	seeps from waste rock pile; BLM polygon identified as "mine, closed/collapsed entrance"	
CC-5	O'Neil Gulch	BUR130	Marsh No.1						3,000	3,000	2.38	2.38														BLM	BLM polygon identified as "mine adit"
CC-5	O'Neil Gulch		Marsh No.2						X																		
<b>Non Producers</b>																											
CC-6	Canyon Creek		Blue Ribbon Group						X	6.177	0.11	0.11		80												USFS	
CC-6	Canyon Creek		Military Mine																								
CC-6	Canyon Creek	BUR109	Oom Paul No. 1							62,600	1.14	1.14														BLM	BLM polygon identified as "mine adit"
	Canyon Creek	BUR105	Oom Paul No. 2						X	14,826	0.27	0.27															
CC-5	Canyon Creek	BUR132	Gertie						X	91,703	1.67	1.67					E		Y	SAIC, BLM	collapsing cribbing						
									Total Measured:	317,206	7.91																
									+ 1 not measured, at average area and depth:	106,529	1.94																
									Estimated Total:	423,735	9.85																
<b>Gorge Gulch</b>																											
CC-5	Gorge Gulch	BUR149	Ajax No.2							10,400	10,400	0.51	0.51												BLM		
CC-5	Gorge Gulch	BUR098	Hercules No.5	5	591-7,180	1510-49,800	1.9-53		93,800	93,800	3.2	3.2					A. S.		Y	SAIC, BLM	adit flow infiltrates dump; seep emerges from dump toe						
CC-5	Gorge Gulch	BUR085	Hercules No.1						93,300	93,300	0.41	0.41					BLM		BLM	BLM polygon identified as "Mining disturbed area"							
CC-5	Gorge Gulch	BUR086	Hercules No.2						16,500	16,500	1.67	1.67					BLM		BLM								
CC-5	Gorge Gulch	BUR087	Hercules No.3						6,700	6,700	3.88	3.88					BLM		BLM								
CC-5	Gorge Gulch	BUR090	Hercules No.4						55,000	55,000	10.49	10.49					BLM		BLM								
CC-5	Gorge Gulch	BUR165	Honolulu Mine						1,700	1,700	0.21	0.21					BLM		BLM								
CC-5	Gorge Gulch	BUR180	Stanley Mine						X	12,630	0.23	0.23					BLM		BLM	BLM polygon identified as "mine adit"							
CC-5	Gorge Gulch	BUR099	Benton Mine						X	11,532	0.21	0.21					BLM		BLM	BLM polygon identified as "mine adit"							
CC-5	Gorge Gulch	BUR092	Fairview-Wild West Mine						X	10,433	0.19	0.19					BLM		BLM	BLM polygon identified as "mine adit"							
									Total Measured:	311,995	21.00																
									+ none not measured, at average area and depth:	-	0.00																
									Estimated Total:	311,995	21.00																
<b>Middle Canyon Creek</b>																											
CC-5	Canyon Creek	BUR093	Hummingbird Mine No. 4						X	7,688	0.14	0.14					BLM		BLM	BLM polygon identified as "mine adit"							
CC-4	Canyon Creek	BUR128	Hecla Mine						X								BLM		BLM								
CC-4	Canyon Creek	BUR128	Star Mine & Mill														BLM		BLM								
CC-4	Canyon Creek	BUR129	Tiger Poorman Mine						X	103,784	1.89	1.89					BLM		BLM								
CC-4	Canyon Creek	BUR094	Sherman Mine 600 Level						X	76,877	1.4	1.4					BLM		BLM								
CC-3	Canyon Creek	BUR075	Oreano Adit (1000)						X	96,096	1.75	1.75					BLM		BLM								
CC-4	Canyon Creek	BUR076	Sherman 1500						X	6,040	0.11	0.11					BLM		BLM								
CC-4	Canyon Creek	BUR096	Anchor Group						X	77,975	1.42	1.42					BLM		BLM								
CC-4	Canyon Creek		Union Mine																								
CC-3	Canyon Creek	BUR073	Standard-Mammoth (Campbell Adit)						X	289,386	5.27	5.27					BLM		BLM								

**Table A-1 Rev. 1 Canyon Creek Waste Rock Dump Inventory**

Table A-1 Rev. 1 Canyon Creek Waste Rock Dump Inventory.							Type (#)	**Volumes estimated from BLM field work mapping, X-Waste dump was noted, no volume.										
							H: Homogeneous	*Areas from BLM source GIS coverage										
				Concentrations:			M: Mixed with tailings											
				The widest range identified is listed.			(#), number of dumps											
Reach	Tributary	Polygon Number	Location	# of Samples	Concentration (mg/kg)			Volume**	Est. volume	Area*	Est. Area	Depth	GW/SW interaction	Seep sampled	Physical in-stability	Reference	Comments	
CC-1	Canyon Creek	WAL011	Canyon Silver-Formosa Mine & Mill		Zinc	Lead	Cadmium	Type	(c.yd)	(c.yd)	(acres)	(acres)	(ft)			SAIC, BLM	BLM polygon identified as "mine adit"	
CC-1	Canyon Creek		Sisters					X										
								Total Measured:	-		0.00							
				+ 1 not measured at average area and depth:				106,529			1.94							
				Estimated Total:				106,529			1.94							

GW/SW Interaction: A-adit discharge enters dump; S-seeps; E-Surface water eroding dump

Page 2/2

**Table A-2 Rev.1. Nine Mile Creek Waste Rock Dump Inventory.**

Table A-2 Rev.1. Nine Mile Creek Waste Rock Dump Inventory.				Type (#)															
				H: Homogeneous			* Area from BLM 1999 unless noted.												
				Concentrations:			M: Mixed with tailings			** X-Waste dump was noted, no volume.									
				The widest range identified is listed.			(#), number of dumps												
Reach	Tributary	Polygon Number	Location	# of Samples	Concentration (mg/kg)		Type	Volume**	Est. volume	Area*	Est. Area	Depth	GW/SW interaction	Seep Sampled	Physical In-stability	Reference	Comments		
<b>Upper EF Ninemile Creek</b>					Zinc	Lead	Cadmium	(c.yd)	(c.yd)	(acres)	(acres)	(ft)							
EFNM-5	East Fork Nine Mile		Little Sunset																
EFNM-5	East Fork Nine Mile	BUR051	Sunset Mine					X	99,391	1.81	1.81				BLM	BLM polygon identified as mine adit			
EFNM-5	East Fork Nine Mile	BUR083	Ambergris Adit																
EFNM-5	East Fork Nine Mile	BUR053, BUR160	Interstate-Callahan				H (2)	X	691,891	12.60	12.60	A, S	Y	SAIC, BLM	adit discharge water infiltrates dump				
								Total Measured:	791,282		14.41								
								+ none not measured, at average area and depth:	-		0.00								
								Estimated Total:	791,282		14.41								
<b>East Fork Ninemile Creek</b>																			
EFNM-4	East Fork Nine Mile	BUR056, BUR170-2	Tamarack-Custer				H (4)	< 549,000	549,000	17.00	17.00	E		SAIC, BLM	Possible RI seep samples, creek flows under main dump. BLM polygons BUR170, BUR 171 & BUR 172 labelled as "mine, closed/collapsed entrance"				
		BUR059	Tamarack-Custer No. 1 & 2					X	95,547	1.74	1.74			BLM					
		BUR057	Tamarack No. 4					X	49,970	0.91	0.91			BLM					
		BUR058	Tamarack No. 3					X	53,265	0.97	0.97			BLM					
EFNM-3	East Fork Nine Mile	BUR054	Rex Mine & Mill					X				A, S		SAIC	Rex #2 flow infiltrates dump; seep emerges from dump toe. BLM polygon covers the entire mill and tailings pile area.				
	East Fork Nine Mile	BUR139														BLM polygon labeled "mine adit"			
EFNM-2	East Fork Nine Mile	OSB044	Success Mine				M (2)	X		10.25	10.25			SAIC, BLM	Some waste rock on tailings pile, no volume estimate of waste rock.				
	East Fork Nine Mile	BUR061	Success No. 2					X	77,975	1.42	1.42			BLM					
	East Fork Nine Mile	BUR060	Success No. 1					X	117,512	2.14	2.14			BLM					
								Total Measured:	943,268		34.43								
								+ 1 not measured, at average area and depth:	106,529		1.94								
								Estimated Total:	1,049,797		36.37								
<b>Main Stem Ninemile Creek</b>																			
NM-2	Main Stem Nine Mile	OSB039	Dayrock Main					X						SAIC	waste dump at mill site behind buildings. BLM polygon identified as "mill site"				
NM-2	Blackcloud	OSB082	Monarch													BLM polygon identified as "mine, closed/collapsed entrance"			
NM-2	Blackcloud	OSB032	Duluth													BLM polygon identified as "mine adit"			
NM-2	Blackcloud	OSB033	Ruth					X		0.68				BLM					
NM-2	Blackcloud	OSB038	California				(4)	X						SAIC, BLM	BLM polygon identified as "mine adit"				
NM-2	Main Stem	OSB055	Silver Star													BLM polygon identified as "mine adit"			
								Total Measured:	-		0.00								
								+ 2 not measured, at average area and depth:	213,059		3.88								
								Estimated Total:	213,059		3.88								

**Table A-3. Pine Creek Waste Rock Dump Inventory.**

Table A-3. Pine Creek Waste Rock Dump Inventory.								Type (#)			**Volumes from McNary unless otherwise noted, X-Waste dump was noted, no volume.							
				Concentrations:				H: Homogeneous	*Areas from McNary unless otherwise noted									
				The widest range identified is listed.				M: Mixed with tailings	(a)-CCJM									
Reach	Tributary	Polygon Number	Location	# of Samples	Concentration (mg/kg)			Type	Volume**	Est. volume	Area*	Est. Area	Depth	GW/SW	Seep sampled	Physical In-stability	Reference	
<b>East Fork Pine Creek</b>																		
PC-	East Fork Pine Creek	MAS050	Constitution Mine & Mill Upper	6	5000-40,000	3100-14,000	17-120	H	21,365 (a)	1,365 *	1.14 (a)	1.14 *		A		Y	BLM, McNary	
	East Fork Pine Creek	MAS027	Constitution Mine & Mill Lower	2	340-1240	314-710	1.0 - 7		7,000	7,000	0.32	0.32					BLM, McNary	
PC-	East Fork Pine Creek	MAS083	Nabob Mine 300 Level	5	64- 16,200	200-97,600	<1.0-82 (Cd); 75-1,200 (As)	H (2)	8,000	8,000	0.6	0.6				Y	BLM, McNary	
		MAS008	Nabob Mine 600 Level	8	690-46,400	4400-53,300	<1.0-110 (Cd); 120-510 (As)	H	25,000	25,000	0.8	0.8		E		BLM, McNary		
		MAS007	Nabob Mine & Mill 1300 Level	6	480-6000	150-9200		H	48,000	48,000		0.87				BLM, McNary		
PC-	East Fork Pine Creek	MAS067	Lookout Mtn Mine	5	41-180	69 - 9300	<1.0 - <1.0	H (2)	50,000	50,000	1.5	1.5		S	Y	BLM, McNary	Doesn't include ore bin sample	
<b>Non Producers</b>																		
PC-	Trapper Creek	MAS029	Big It 1	1	47	180		M	700	700		0.013				BLM, McNary	some tailings and concentrate on site; BLM polygon identified as "mine adit"	
	East Fork Pine Creek		Big It 2	1	79	38			X									
PC-	Hunter Creek	MAS032	L&J	1	41	21			80	80		0.001				BLM, McNary	most of waste rock washed away by creek; BLM polygon identified as "prospect"	
PC-	Dry Gulch	MAS023	Blue Eagle	4	81-340	23-110	<1.0-<1.0		>1,000	1,000		0.018		E		BLM, McNary	dump lies across Dry Creek; BLM polygon identified as "mine"	
PC-	Blue Eagle Creek	MAS052	Owl	1	4400	2600		H	X					E		BLM, McNary	Little material left, most washed away by creek; ; BLM polygon identified as "mine, closed/collapsed entrance"	
PC-	East Fork Pine Creek	MAS054	SF Fraction	1	2400	1600			X							BLM, McNary	BLM polygon identified as "mine adit"	
PC-	East Fork Pine Creek		Mitchell	1	130	48			35	35		0.001				McNary		
	East Fork Pine Creek		Marmon	1	83	21			120	120		0.002				McNary		
PC-	East Fork Pine Creek		Douglas (West)						120	120		0.002				McNary		
					Total Measured:	141,420			5.27									
					+ 3 not measured, at average area and depth:	319,588			5.82									
					Estimated Total:	461,008			11.09									
<b>Pine Creek Tributaries</b>																		
PC-	Douglas Creek	MAS025	Douglas Group	10	220-59700	620-33,800	1.0-140	M	35,000	35,000		0.637		E		Y	BLM, McNary	waste dump cribbing collapsing; surface water run-off may produce acid conditions; BLM polygon identified as "tailings"
PC-	Highland Surprise Creek	MAS078	Highland Surprise Mine & Mill	37	1100-34,100	1000-51,900	1300-2800 ppb (Hg)	H	45,000	45,000	3.5	3.5		A, S	Y	Y	BLM, McNary	Mixed waste under tracks, seep Cd & Zn exceed EPA Goldbook; adit discharge through dump, creek eroded north side during high flows; BLM polygon identified as "mine adit"
		MAS079	Lower Highland Surprise	3	140-420	1000-11,800	<1.0-1.0	H	1,000	1,000	0.05	0.05		7-80			BLM, McNary	
PC-	Highland Surprise Creek	MAS021	Nevada Stewart Mine	3	130-3300	58-6500	<1.0-1.0	H	1,000	1,000	0.14	0.14		S, E	Y		BLM, McNary	Creek runs along lower edge; Cd & Zn exceed EPA Goldbook; BLM polygon identified as "mine adit"
PC-	Red Cloud Creek	MAS081	Red Cloud Mine	34	120-69,800	39-28,300	<1.0-150	H	95,000 (a)	95,000	2.6	2.6		E			BLM, McNary	toe of dump along creek; ore bin sample: 70,700 mg/kg Pb; 110,300 mg/kg Zn; 250mg/kg Cd
PC-	Denver Creek		Sidney Mine & Mill		no samples / no volumes									S, E			BLM, McNary	seep at toe of dump, maybe from adit, creek runs along base
PC-	Denver Creek	MAS018	Denver Mine	2	4000-5400	2600-11,800	12-17	H (2)	2,700	2,700		0.049		E		Y	BLM, McNary	creek actively eroding lower pile; BLM polygon identified as
PC-	Denver Creek	MAS015	Little Pittsburg Mine & Mill	3	2100-6600	1700-3900	6-21	H	<2000	2,000	1.51	0.036		S	Y		BLM, McNary	Mixed at mill, seep-1 gpm exceed Pb, Zn
PC-	Denver Creek	MAS014	Hilarity Mine		no samples				<10,000	10,000	150' long	0.182		S	Y	Y	BLM, McNary	seep in dump & dump adjacent to creek
<b>Non Producers</b>																		
PC-	Nabob Creek	MAS012	Lynch Pine Crk Mine						500	500							BLM, McNary	BLM polygon identified as "mine adit"
PC-	Highland Creek	MAS019	Star Antimony	2	94-160	13-75	<1.0-<1.0 (Cd)390-1100 (As)	H	1,000	1,000	0.35						BLM, McNary	material scattererd over 1 acre area
					Total Measured:	654,208			18.29									
					+ 1 not measured, at average area and depth:	106,529			1.94									
					Estimated Total:	760,737			20.23									
<b>Main Stem Pine Creek</b>																		
PC-	Main Stem Pine Creek	MAS003	Liberal King Mine & Mill					X	19,768	0.36	0.36	65-80				CCJM, BLM	mixed tailings around bldgs, size particle analysis; BLM polygon identified as "mill site"	
PC-	Main Stem Pine Creek	KLW081	Amy Matchless Mine & Mill		no samples			X	13,179	0.24	0.24	A				CCJM, BLM	adit drainage may enter dump; BLM polygon identified as "mill	
PC-	Main Stem Pine Creek	KLW080	Bobby Anderson Mine					X		0.3						SAIC, BLM	BLM polygon identified as "mine adit"	

Table A-3. Pine Creek Waste Rock Dump Inventory.										**Volumes from McNary unless otherwise noted, X-Waste dump was noted, no volume.									
										*Areas from McNary unless otherwise noted									
										(a)-CCJM									
Concentrations: The widest range identified is listed.										H: Homogeneous M: Mixed with tailings (#), number of dumps									
Reach	Tributary	Polygon Number	Location	# of Samples	Concentration (mg/kg)			Type	Volume**	Est. volume	Area*	Est. Area	Depth	GW/SW	Seep	Physical	Reference	Comments	
PC-	French Gulch	CAT008	Hypotheek Mine & Mill		Zinc	Lead	Cd & other	X	(c.yd)	(c.yd)	(acres)	(acres)	(ft)	Interaction	sampled	In-stability		SAIC, BLM	
									Total Measured:	32,947	0.6								
								+ 2 not measured, at average area and depth:	213,059	3.88									
								Estimated Total:	246,006	4.48									

**Table A-4 Rev. 1 South Fork Coeur d'Alene River Waste Rock Dump Inventory.**

**Table A-4 Rev. 1 South Fork Coeur d'Alene River Waste Rock Dump Inventory.**

										Type (#)									
										H: Homogeneous									
										M: Mixed with tailings									
										(#), number of dumps									
Reach	Tributary	Polygon	Location	Workings	# of Samples	Concentration (mg/kg)	Zinc	Lead	Cadmium	Type	Volume (c.yd)	Est. volume (c.yd)	Area (acres)	Est. Area (acres)	Depth (ft)	GW/SW interaction	Physical In-stability	Reference	Comments
SF-3	Moon Creek	KLE076	Silver Crescent	Silver Crescent adits						M (2) H	30,000	*	1.18	*			REI, BLM	site currently being remediated	
SF-3	Moon Creek	KLE078	Charles Dickens	Charles Dickens adit								1.891	4.93	0.03	0.03		REI, BLM	site currently being remediated	
SF-3	West Fork Moon Creek	KLE007	Washington-Idaho		1	1.100	1.200	13											
SF-3	Elk Creek	KLE020	New Hilarity	New Hilarity															
SF-3	Elk Creek	KLE021	Alhambra	Alhambra															
<b>Non Producers</b>																			
SF-6	Revenue Gulch	OSB073	Silverton Prospect	Silverton Prospect								21,965	0.4	0.40					
SF-6	Revenue Gulch		Merry Widow	Merry Widow															
SF-5	Nuckles Gulch		Wilbur	Wilbur															
SF-5	Two Mile Creek		Unnamed Adit	Unnamed Adit															
SF-4	Jewell Gulch		Unnamed Adit	Unnamed Adit															
SF-4	Terror Gulch	KLE067	St. Joe Quartz Prospect	St. Joe No.4	2	1,400-6,700	4,800-8700	6.2-29	(3)		27,456	0.50	0.50	10-25	E	USFS	truncated by Terror Gulch, rails lines in dump		
SF-4	Terror Gulch	OSB074		St. Joe No.1							3,782	0.07	0.07	15-30	A	USFS	dump covered with vegetation; adit water flows over dump		
SF-4	Terror Gulch			St. Joe No.2	2	85-91	84-390	2.6-3.8			13,728	0.25	0.25	15-30		USFS	dump top vegetated		
SF-4	Terror Gulch	KLE069		St. Joe No. 3, Adit No. 1	1	950	910	18	X		454	0.01	0.01	10-50	E	USFS, BLM	creek flows through dump, composite sample		
SF-4	Terror Gulch	KLE069		St. Joe No. 3, Adit No. 3						X	567	0.01	0.01	25-40	E	USFS, BLM	dump built out into drainage		
SF-4	Terror Gulch	KLE069		St. Joe No. 3, Adit No. 4						X	252	0.005	0.00	5-15		USFS, BLM	(BLM polygon includes all 3 adits)		
										Total Measured:	79,295	1.52							
										+ 10 not measured, at average area and depth:	1,065,293	19.40							
										Estimated Total:	1,144,588	20.92							
<b>Lower South Fork (Elizabeth Park to Confluence)</b>																			
SF-2	Milo Gulch		Last Chance	Last Chance Nos. 1 & 2 adits; Sweeney Tunnel						X									
SF-2	Milo Gulch		Bunker Hill Mine	Kellogg Tunnel															
				Bunker Hill Nos. 1-3															
				Russel Tunnel													BLM		
				Sullivan adits													BLM		
				Tyler adit															
SF-2				Senator Stewart															
SF-2				Ontario															
SF-2				Caledonia															
SF-2				Crown Point															
SF-2				Black Hawk															
<b>Bunker Hill Site RI/FS Task 1.2</b>																			
SF-1	Little Pace Creek		Dump No. 1-1	Idaho General	1	mg/kg	189	82.2	<1.0	H	1,500	1,500	0.03	E	D&M	toe impinges floodplain			
SF-1	Silver Creek		Dump No. 1-2	Paoe Mine	1	8,070	10,800	45.7	H	260,000	260,000	4.73	E	D&M	dump fills portion of creek valley				
SF-2	Grouse Creek		Dump No. 1-3	Wwomino ?	1	238	1,900	2.1	H(4)	8,500	8,500	0.15	E	D&M	toes of dump in floodplain				
SF-2	Magnet Gulch		Dump No. 1-4	Silver Bowl	1	721	19,400	4.8	H(2)	3,500	3,500	0.06	E	Y	creek undermining south flank of dump				
SF-2	Deadwood Gulch		Dump No. 1-5	Arizona Tunnel	1	1,490	13,100	7.5		250,000	250,000	4.55	E	D&M	toe erosion west side of dump				
SF-2	Deadwood Gulch		Dump No. 1-6	Sierra Nevada	1	1,970	10,800	13.7	H(2)	40,000	40,000	0.73							
SF-2	Milo Gulch		Dump No. 1-7	Sweeney	1	2,880	15,900	10.4	H	60,000	60,000	1.09							
SF-2	Milo Gulch		Dump No. 1-8	Bunker Hill Mine	1	3,070	16,300	8.1	H	50,000	50,000	0.91							
SF-2	Milo Gulch		Dump No. 1-9	Bunker Hill Mine (Reed Tunnel?)	1	6,990	3,730	13.3	H	200,000	200,000	3.64						some trees growing on dump	
SF-2	Milo Gulch		Dump No. 1-10		1	2,750	6,700	9	H	12,000	12,000	0.22						drainage carried in culvert under dump; slag veneer	
SF-2	Milo Gulch		Dump No. 1-11		1	2,610	6,500	9.5	H	2,500	2,500	0.05							
SF-2	Milo Gulch		Dump No. 1-12	Bunker Chance	1	327	389	2.6	H	8,500	8,500	0.15							
SF-2	Slaughterhouse Gulch		Dump No. 1-13		1	96	402	2.1	H(2)	4,500	4,500	0.08							
SF-2	Elk Creek		Dump No. 1-14		1	56	163	0.88	H(3)	2,500	2,500	0.05						dump well armored	
SF-2	Italian Gulch		Dump No. 1-15		1	158	2,560	0.38	H(2)	4,500	4,500	0.08							
Pine Creek			Dump No. 2-1							H	600	600	0.01					40' tree growing on dump	
Pine Creek			Dump No. 2-2	Bobby Anderson?						H	2,500	2,500	0.05					active rock quarry now	
Pine Creek			Dump No. 2-3	Amy Matchless?						H	<1,000	750	0.01	E	D&M	toe in floodplain			
Above Page			Dump No. 2-4							H	10,000	10,000	0.18						
Above Page			Dump No. 2-5							H	10,000	10,000	0.18						
Above Page</																			

**Table A-4 Rev. 1 South Fork Coeur d'Alene River Waste Rock Dump Inventory.**

										Type (#)									
										H: Homogeneous									
										M: Mixed with tailings									
										(#), number of dumps									
Reach	Tributary	Polygon	Location	Workings		# of Samples	Zinc	Lead	Cadmium	Type	Volume (c.yd)	Est. volume (c.yd)	Area (acres)	Est. Area (acres)	Depth (ft)	GW/SW interaction	Physical In-stability	Reference	Comments
										Total Measured:	1,021,600		18.60						
										+ 1 not measured, at average area and depth	106,529		1.94						
										Estimated Total:	1,128,129		20.54						

**Table A-5 Rev.2. Canyon Creek tailings, mill sites and impoundments inventory.**

<b>Table A-6 Rev.2. Ninemile Ck tailings, mill sites and impoundments inventory.</b>																		
(NM)			Concentrations:			Type:			Bd: Bed Bk: Banks H: Historic floodplain I: Impoundment (engineered or not) M: Mill site			See codes on References page						
			UEFNM: Upper East Fork Ninemile Creek			J: Jig tailings												
			EFNM: East Fork Ninemile Creek			F: Flotation tailings												
			MSNM: Main Stem Ninemile Creek			R: Rock												
NRDA RP	BLM	Polygon Number	Name/Location	Measured Concentrations (mg/kg)			Number of Samples	Type	Area (acres)	Depth min. (ft)	Depth max. (ft)	Tailings volume min. (c.yd)	Location in floodplain	GW/SW interaction	Transport potential	Mixing w/ sediments	Reference	Comments
Code	Reach			Zinc	Lead	Cadmium												
<b>Riparian/Floodplain tailings</b>																		
NM-T01	UEFNM	BUR 140	EFNM impacted riparian	3,600 to 12,200	1,760 to 21,100	ND to 55	3 composites (Paulson); 2 (URSG)	J/F	5.5	1.0	1.0	8,873	8,873	Bd/Bk/H	Y	Y	BLM 98, Paulson 96a, Box 99, NRDA 96, URSG 98	Volumes based on BLM 98 area x NRDA 96 depth
NM-T02	EFNM	OSB057	EFNM impacted riparian	265 to 21,900	258 to 4,040	2.66 to 34.7	7 (URSG)	J/F	9.67	3.0	3.0	46,803	46,803	Bd/Bk/H	Y	Y	BLM 98, Paulson 96a, Box 99, NRDA 96, URSG 98	Volumes based on BLM 98 area x NRDA 96 depth
NM-T03	EFNM	OSB056	EFNM impacted riparian					J/F	10.97	4.5	4.5	79,642	79,642	Bd/Bk/H	Y	Y	BLM 98, Paulson 96a, Box 99, NRDA 96, URSG 98	Volumes based on BLM 98 area x NRDA 96 depth
NM-T04	MSNM	OSB059	NM below Davrock - impacted riparian					J/F	5.43	1.0	1.0	9,000	9,000	Bd/Bk/H	Y	Y	BLM 98, Box 99, NRDA 96, URSG 98	Volumes based on BLM 98 area x NRDA 96 depth
NM-T05	MSNM	WAL033	Potential tailings deposit	278 to 7,260	1,730 to 14,100	0.95 to 66.9	6 (URSG)	J/F	31.73	1.0	1.0	51,000	51,000	Bd/Bk/H	Y	Y	BLM 98, Box 99, NRDA 96, URSG 98	Volumes based on BLM 98 area x NRDA 96 depth
									<b>TOTALS:</b>	<b>63.3</b>		<b>195,318</b>	<b>195,318</b>					
<b>Piles &amp; Impoundments</b>																		
NM-P01	EFNM	BUR055	Interstate millsite/pile/repository	390 to 79,700	3,840 to 48,000	2.1 to 304	29 (Golder); 3 (Gross)	J/F/R	8.96	0.0	1.0	66,000	80,455	Bd/Bk/H/M/I	Y	Y	BLM 98, SAIC 93, Box 99, SVNRT 98, Calabretta 99, NRDA 96, Gross 82, Golder 97	900 cy removed from millsite riparian area, 66,000 cy from pile, and 520 cy from around foundations (1998-1999), taken to SVNRT repository (SVNRT 98, Calabretta 99)
NM-P02	EFNM	BUR054	Rex No. 2/Sixteen-to-One Mine	74.1 to 10,900	26.0 to 25,700	ND to 78.4	8 (URSG)	F	21.4			84,000	84,000	I/M	Y		SAIC 93, BLM 98, E&E 93, URSG 98, Gross 82, NRDA 96	Upland; volume estimate includes tailings + millsite soils
NM-P03	EFNM	OSB044	Success Mine "rock dump"	2430	8010	10.9	3 composites (E&E)	J/F/R	10.26			200,000	200,000	I/Bk/H/M	Y	Y	BLM 98, E&E 93 EPA 93, E&E 95, SAIC 93, Box 99, NRDA 96	Waste rock over tailings; bulk of pile thought to be tailings
NM-P04	MSNM	OSB052	Davrock impoundment/SVNRT repository					J/F	5.55	15.0	30.0	134,310	268,620	I/H			BLM 98, Box 99, NRDA 96, SAIC 93	
									<b>TOTALS:</b>	<b>46.17</b>		<b>484,310</b>	<b>633,075</b>					
<b>Mill Sites</b>																		
NM-M01	EFNM	OSB089	Success No. 3 and mill site						0.27			3,000	3,000	M			BLM 98, NRDA 96	
NM-M02	EFNM	(No BLM polygon)	Old Rex Mill, a.k.a. Old Custer mill					J/F	1			9,000	9,000	M			SAIC 93	No BLM polygon, area is an estimate only
NM-M03	MSNM	OSB039	Dayrock mine and mill					F	11.76	5.0	5.0	11,067	11,067	M/Bk/H	Y	Y	BLM 98, Box 99, NRDA 96, SAIC 93, Gross 82	Volume estimate includes small tailings piles (~1 acre x 5 ft) + millsite soils (~3,000 c.vd)
NM-M04	MSNM	OSB061	Blackcloud Ck Millsite					J/F	1.5			7,000	7,000	M			SAIC 93, BLM 98	Volume of millsite soils. no tailings visible
									<b>TOTALS:</b>	<b>14.53</b>		<b>30,067</b>	<b>30,067</b>					
<b>Considered remediated</b>																		
NM-R01	EFNM	OSB040	EF NM Ck Hecla rehab	1,120 to 4,330	154 to 4,170	3.01 to 22.5	5 (URSG)		9.35			15,000	15,000	Bk/H			BLM 98, Box 99, SVNRT 98, Calabretta 99, NRDA 96, URSG 98	* Considered remediated; 11,500 cy removed in 1994-95 (Calabretta 99). Samples date from December 1997.
NM-R02	EFNM	OSB058	EF NM Ck SVNRT rehab						12.14			21,000	21,000	Bk/H			BLM 98, Box 99, SVNRT 98, Calabretta 99, NRDA 96	* Considered remediated; 38,553 cy removed 1994-95 (Calabretta 99).
NM-R03	MSNM	OSB060	NM Ck SVNRT rehab nr Blackcloud	1,900 to 17,600	3,720 to 20,100	10.1 to 194	4 (URSG)		15.87			25,000	25,000	Bk/H			BLM 98, Box 99, SVNRT 98, Calabretta 99, NRDA 96, URSG 98	* Considered remediated; 4,400 cy removed 1994-95 (Calabretta 99). Samples date from December 1997.
									<b>TOTALS:</b>	<b>37.36</b>								

<b>Table A-7 Rev.2. Pine Creek tailings, mill sites and impoundments inventory.</b>																					
(PC)			Concentrations:						Type:						See codes on References page						
			The widest range identified is listed.						J: Jig tailings F: Flotation tailings R: Rock						Bd: Bed Bk: Banks H: Historic floodplain I: Impoundment (engineered or not) M: Mill site						
NRDA RP	Reach	BLM	Measured Concentrations (mg/kg)						Number of Samples	Type	Area (acres)	Depth min. (ft)	Depth max. (ft)	Tailings volume min. (c.yd)	Tailings volume max. (c.yd)	Location in floodplain	GW/SW interaction	Transport potential	Mixing w/ sediments	Reference	Comments
Code	Polygon Number	Name/Location	Zinc	Lead	Cadmium																
<b>Riparian/Floodplain tailings</b>																					
PC-T01	EFPC	MAS047 (Partial)	EF Pine Ck impacted riparian			121 to 1,610	73.2 to 1,391	0.3 to 25	4 (CCJM 98); 7 (McN 95), 27 (TDM), 23 (E&E)	J/F	105	1	3	169,400	508,200	Bk/Bd	Y	Y	Y	BLM 98, McN 95, URSG 99, E&E 95	
PC-T02	TPC	MAS045, MAS046	Highland & Red Cloud impacted riparian			161 to 3,790	192 to 6,680	ND to 14.4	8 (CCJM 98); 1 (Hudson 98a)	J/F	27.71	1	3	44,705	134,116	Bk/Bd	Y	Y	Y	BLM 98, Hudson 98a	
PC-T03	TPC	MAS040, MAS041, MAS042, MAS043	Denver Ck. impacted riparian			770 to 2,610	426 to 3,260	ND to 15.5	6 (CCJM 98)	J/F	8.1		-		2,000	Bk/Bd	Y	Y	Y	CCJM 98, BLM 98, McN 95	Less than 2,000 c.yds remaining after 1996-97 removals (NRDA 96).
PC-T04	MSPC	MAS047 (Partial)	Pine Ck impacted riparian			400 to 1,780	204 to 900	1.09 to 14.0	4 (CCJM 98); 4 (McN 95), 16 (URSG 99), 8 (Fousek)	J/F	163.62	0.5	3	131,987	791,921	Bk/Bd	Y	Y	Y	BLM 98, Fousek 96, CCJM 98, McN 95, URSG 99	
									TOTALS: 304.43 346,092 1,436,237												
<b>Piles &amp; Impoundments</b>																					
PC-P01	EFPC	MAS049	Upper Constitution tailings			2,960 to 6,930	4,240 to 5,510	6.6 to 18.2	3 (CCJM 98)	J/F	2.93	2	13	35,000	35,000	I/Bk	Y	Y	Y	CCJM 98, BLM 98, Fortier 99, McN 95	361 cy removed and taken to CIA in 1998 (Fortier 99)
PC-P02	EFPC	MAS036	Denver Creek Tailings			408 to 16,800	847 to 5,700	ND to 120	3 (CCJM 98); 2 (McN 95)	F	1.87	0.5	3.5	2,700	2,700	I/Bk	Y			CCJM 98, BLM 98, McN 95	Nr confi. Of Denver Ck & EF Pine Ck; 5200 c.y. removed in 1996-97
PC-P03	EFPC	MAS006	Nabob Tailings Pond			820 to 74,300	1,650 to 75,500	3 to 642	2 (CCJM 98); 82 (McN 95)	F*	4.1		20	42,000	42,000	I/Bk	Y			CCJM 98, SAIC 93, BLM 98, McN 95	Uncovered (no liner) impoundment; *much higher concentrations in the top 6" where water used to clean equipment was flushed
									TOTALS: 8.9 79,700 79,700												
<b>Mill Sites</b>																					
PC-M01	TPC	MAS078	Highland Surprise Mill			130 to 420	1,000 to 11,800	ND to 1.0	3 (McN 95)	J/F	2.51	1	5	4,044	20,219	M	Y		Y	CCJM 98, SAIC 93, BLM 98, McN 95, Fortier 99	No visible tailings; samples are labelled "dump"
PC-M02	TPC	MAS020	Red Cloud (Sidney) Mill (on Highland & Red Cloud Cks)			290 to 110,300	130 to 70,700	ND to 250	34 (McN 95)	J/F	5.66	0	0.5	-	4,566	M				CCJM 98, SAIC 93, BLM 98, McN 95, Fortier 99	No visible tailings; samples are labelled "dump" (McN 95). Some evidence of concentrate; 2,000 c.y. removed by BLM in 1998 (CCJM 98). 688 cy removed in 1998 around mill foundations and taken to CIA (Fortier 99).
PC-M03	TPC	MAS017	Sidnev (Denver 500 Level) Mill								2.61	1	3	4,211	12,632	M				BLM 98, McN 95, SAIC 93	
PC-M04	TPC	MAS016	Little Pittsburg Mill			220 to 9,800	200 to 6,300	ND to 31.0	4 (McN 95)	J/F	0.97	1.5	5	2,347	7,825	M				BLM 98, McN 95, SAIC 93, Fortier 99	Identified only as mine by BLM 98. No visible tailings; samples are labelled "dump"
PC-M05	TPC	MAS083	Nabob Millsite							J/F	2.81	0.5	3	2,267	13,600	M				BLM 98, SAIC 93	
PC-M06	EFPC	MAS026, MAS085	Upper Constitution millsite			29 to 18,900	70 to 6,400	4.0 to 85	3 (CCJM 98); 41 (McN 95)	J/F	2.84	1	3	4,582	13,746	M/Bk	Y			CCJM 98, SAIC 93, BLM 98, Fortier 99, McN 95	
PC-M07	EFPC	MAS048	Lower Constitution millsite & tailings			24,300 to 29,800	9,500 to 11,900	82 to 112	5 (McN 95)	J	0.68	2	7	2,194	7,679	M/Bk				CCJM 98, SAIC 93, BLM 98, Fortier 99, McN 95	
PC-M08	EFPC	MAS025	Douglas mine & millsite			360 to 59,700	620 to 33,800	ND to 140	10 (McN 95)	F/R	3.39	0.5	5	2,735	27,346	M				BLM 98, McN 95, SAIC 93, Fortier 99	Identified by BLM 98 as rock dump & tailings repository
PC-M09	MSPC	MAS003	Liberal King Millsite						F	3.86	0.3	0.5	1,868	3,114	M				SAIC 93, CCJM 98, BLM 98, BLM 96, Fortier 99	Largely removed in 1996-97 (CCJM 98). 91 cy removed in 1998 (Fortier 99).	
PC-M10	MSPC	CAT008	Hypotheek Mill						J/F	3.22	1	3	5,195	15,585	M				SAIC 93, BLM 98		
									TOTALS: 28.54645 29,442 126,311												
<b>Considered remediated</b>																					
PC-R01	EFPC	MAS024	Douglas mine tailings (former pile)			100 to 9,400	590 to 6,400	<10 to 37	35 (McN 95)	F	3.01					I/Bk				BLM 98, SAIC 93, McN 95, Fortier 99	* Considered remediated (engineered repository); samples results represent pre-removal materials
PC-R02	EFPC	MAS084	Douglas minesite tailings repository (New)			5,400 to 11,900	1,800 to 4,900	17 to 66	3 (McN 95)	J/F	1.63	5	12	30,000	30,000	I/Bk				BLM 98, McN 95, SAIC 93, Fortier 99	McN 95 samples come from old pile predating new repository
PC-R03	MSPC	MAS002	Liberal King Tailings			72 to 1,460	ND to 4,569	ND to 43.3	3 (CCJM 98)	F	2.33	0	0.5	-	1,880	Bk	Y			SAIC 93, CCJM 98, BLM 98, BLM 96	Largely removed (~7,000 c.yds) in 1996-97. Metals concentrations from 1994 tests
PC-R04	MSPC	KLW081	Amy-Matchless Millsite			660 to 24,977	2,590 to 38,744	ND to 231	6 (CCJM 98); 24 (E&E 95)	J/F	5.07		80	80	80	Bk/M	Y	Y	Y	SAIC 93, CCJM 98, BLM 98, BLM 96, E&E 95	Largely removed (~12,000 c.yds.) in 1997. Metal concentrations from tailings samples measured in 1994
									TOTALS: 12.04												
PC-007	EF	Temporary Storage Area																			

**Table A-8 Rev.1. South Fork Coeur d'Alene River tailings, mill sites and impoundments inventory.**

Table A-8 Rev.1. South Fork Coeur d'Alene River tailings, mill sites and impoundments inventory.																				
/SFCDR				Concentrations:				Type:				Rd: Rad				See codes on References page				
Reaches:		USECDR: Upper South Fork Coeur d'Alene		The widest range identified is listed		I: Jig tailings		F: Flotation tailings		R: Rock		H: Historic floodplain		I: Impoundment (engineered or not)		M: Mill site				
NRDA RP Code	Reach	BLM Polygon Number	Name/Location	Measured Concentrations (mg/kg)			Number of Samples	Type	Area (acres)	Depth min. (ft)	max. (ft)	Tailings volume min. (c.vd)	max. (c.vd)	Location in floodplain	GW/SW interaction	Transport potential	Mixing w/ sediments	Reference	Comments	
<b>Riparian/Floodplain tailings</b>				Zinc	Lead	Cadmium														
SFCDR-T01	USFCDR	WAL038	SFCDA impacted floodplain	305 - 13,700	527 - 23,500	1.61 - 81	11 (URSG 99)		149	1	3	240,387	721,160	B/Bk	Y	Y	Y	BLM 98, Box 99, URSG 99		
SFCDR-T02	MSFCDR	WAL004	SFCDA railroad yards & impacted floodplain	503 - 11,500	534 - 6,160	3.13 - 64.4	3 (URSG 99)	J/F	70.27	3	5	340,107	566,845	B/Bk/H	Y	Y	Y	BLM 98, Box 99, SVNRT, URSG		
SFCDR-T03	MSFCDR	OSB120	SFCDA impacted floodplain	112 - 30,800	60 - 58,000	0.5 - 292	32 (Golder), 122 (E&E 95), 5 (URSG 99), 26 (MFG 98)	J/F	214.4	3	5	902,696	1,594,493	B/Bk/H	Y	Y	Y	BLM 98, Golder 96, Box 99, MFG 96, SVNRT, SVNRT 98, URSG 99 E&E 95	58,000 cy taken to Osburn Ponds (1998), 77,000 cy taken to CIA (1998) (SVNRT 98)	
SFCDR-T04	MSFCDR	OSB065	SFCDA impacted floodplain	65.4 - 16,700	2.9 - 56,800	0.24 - 196	9 (Golder), 9 (URSG 99), 61 (E&E 95)	J/F	167.38	1	5	270,040	1,350,199	B/Bk/H	Y	Y	Y	BLM 98, Golder 96, Box 99, Box 96, EPA 97, EPA 98, SVNRT, URSG 99, E&E 95		
SFCDR-T05	MSFCDR	KLE040	SFCDA impacted floodplain					J/F	12.07	1	5	19,473	97,365	B/Bk/H	Y	Y	Y	BLM 98, Box 99, Box 96, EPA 97, EPA 98		
SFCDR-T06	MSFCDR	WAL036	Lake Ck impacted riparian					F	9.27	1	5	14,956	74,778	B/Bk	Y	Y	Y	BLM 98, Box 99		
SFCDR-T07	MSFCDR	WAL034	Shields Gulch impacted riparian					F	16.3	1	5	26,297	131,487	B/Bk	Y	Y	Y	BLM 98, Box 99, SAIC 93		
SFCDR-T08	MSFCDR	KLE047, KLE071, KLE073	Big Ck impacted riparian					F	38.32			107,000	107,000	B/Bk	Y	Y	Y	BLM 98, Box 99, SAIC 93	174,000 tons (SAIC 93)	
SFCDR-T09	LSFCDR	KLE049	SFCDA impacted riparian	1,610 - 27,000	1,530 - 42,000	10.9 - 191	3 (URSG 99)	J/F	67.22	1	5	108,448	542,241	B/Bk	Y	Y	Y	BLM 98, Box 99, URSG 99		
SFCDR-T10	LSFCDR	KLW089, KLW092	SFCDA impacted floodplain					J/F	246.25	1	5	397,283	1,986,417	B/Bk/H	Y	Y	Y	BLM 98, Box 99		
SFCDR-T11	LSFCDR	(Not BLM)	Kellogg impacted floodplain					J/F	250	1	5	403,333	2,016,667	H				Area estimated from map		
SFCDR-T12	LSFCDR	KLW006	I-90 corridor, Smelterville Flats					A	111.31	1	5	179,580	897,901	H				1,500,000 cv removed in 1998 (IDEQ 99)		
SFCDR-T13	LSFCDR	KLW086	Smelterville Flats impacted floodplain	3,000 - 9,900	5,900 - 23,000	26 - 99	9 (Fousek)	J/F	269.16	0.5	1	217,122	434,245	B/Bk/H	Y	Y	Y	BLM 98, Box 99, Fousek 96		
SFCDR-T14	LSFCDR	KLW088	Shoshone County airport					A	67.38	1	5	108,706	543,532	H				1,500,000 cv removed in 1998 (IDEQ 99)		
SFCDR-T15	LSFCDR	KLW093	Page swamp east impacted wetlands					J/F	68.32	1	5	110,223	551,115	Bk/H	Y	Y	Y	BLM 98, Box 99		
SFCDR-T16	LSFCDR	KLW091	Page swamp west impacted wetlands					J/F	38.37	0.5	1	30,952	61,904	Bk/H	Y	Y	Y	BLM 98, Box 99, MFG 98	35,000 cv removed 1998 (IDEQ 99); taken to Page Pond (MFG 98)	
SFCDR-T17	LSFCDR	KLW090	SFCDA river tailings deposition area					J/F	7.12	1	5	11,487	57,435	Bd/Bk/H	Y	Y	Y	BLM 98, Box 99		
SFCDR-T18	LSFCDR	KLW001	SFCDR below Pinehurst Narrows Dam	120 - 24,977	68 - 39,300	6.4 - 231	58 (E&E 95), 8 (Fousek)	J/F	90	1	5	145,200	726,000	B/Bk/H	Y	Y	Y	BLM 98, Box 99, E&E 95 Fousek 96	Area estimated from partial polygon	
								TOTALS:				1892.14	3,633,291	12,460,781						
<b>Piles &amp; Impoundments</b>																				
SFCDR-P01	USFCDR	LOK050	Daisy Gulch tailings pond					J/F	2.73	1	5	4,404	22,022	I/Bk?				BLM 98, Box 99, SAIC 93		
SFCDR-P02	USFCDR	MUL020	Lucky Friday tailings ponds	1,600 - 4,500	1,500 - 14,000	9 - 39	6 (Gross 82)	J/F	11.03			183,000	183,000	I/Bk/H				BLM 98, Box 99, SAIC 93, Gross 82	Tailings discharged to all ponds btwn 1969 & 1990 estimated at 1,500,000 tons (SAIC 1993) - say 925,900 cy; volume pro-rated for respective areas.	
SFCDR-P03	USFCDR	MUL037	Lucky Friday tailings ponds, active					J/F	10.05			167,000	167,000	I/Bk/H				BLM 98, SAIC 93	Tailings discharged to all ponds btwn 1969 & 1990 estimated at 1,500,000 tons (SAIC 1993) - say 925,900 cy; volume pro-rated for respective areas.	
SFCDR-P04	USFCDR	MUL058	Lucky Friday tailings ponds, active					J/F	34.72			576,000	576,000	I/Bk/H				BLM 98, SAIC 93	Tailings discharged to all ponds btwn 1969 & 1990 estimated at 1,500,000 tons (SAIC 1993) - say 925,900 cy; volume pro-rated for respective areas.	
SFCDR-P05	USFCDR	MUL132	National millsite adjacent tailings					J/F	0.37	1	5	597	2,985	I/Bk				BLM 98, Box 99, SAIC 93		
SFCDR-P06	USFCDR	WAL077	Golconda tailings	28.0 - 20,700	353 - 45,800	1.0 - 100	3 (Hudson)	J/F	6.71			22,840	22,840	I/Bk/H	Y	Y	Y	BLM 98, Box 99, Hudson 98b		
SFCDR-P07	MSFCDR	WAL080	Galena Mine tailings	22 - 78	94 - 2,750	ND - 2.13	12 (Gross 82)	F	25.14			1,235,000	1,235,000	I/Bk				Long 96, SAIC 93 BLM 98, Box 99, Gross 82	Tailings discharged to all ponds btwn 1969 & 1990 estimated at 2,000,000 tons (SAIC 1993) - say 1,235,000 cy	
SFCDR-P08	MSFCDR	WAL001	Osburn tailings ponds					J/F	66.24			3,500,000	3,500,000	I/Bk/H				Y	See "Osburn Ponds" worksheet for detailed breakdown of quantities.	
SFCDR-P09	MSFCDR	KLE024	Sunshine tailings pond/Silver Surprise					F	42.26			707,000	707,000	I/Bk				BLM 98, Box 99, SAIC 93	Tailings discharged to both ponds btwn 1969 & 1990 estimated at 1,800,000 tons (SAIC 1993) - say 1,111,000 cy; volume pro-rated for respective areas.	
SFCDR-P10	MSFCDR	KLE025	Sunshine tailings pond/Hartford Group					F	24.12			404,000	404,000	I/Bk				BLM 98, Box 99, SAIC 93	Tailings discharged to both ponds btwn 1969 & 1990 estimated at 1,800,000 tons (SAIC 1993) - say 1,111,000 cy; volume pro-rated for respective areas.	
SFCDR-P11	MSFCDR	KLE011	Silver Summit tailings pond					J/F	7.89	3	10	38,188	127,292	I/Bk				BLM 98, Box 99, SAIC 93		
SFCDR-P12	MSFCDR	OSB117	Osburn Zanetti stockpiled tailings	215 - 22,000	19.5 - 22,300	0.34 - 83.2	21 (Golder 96)	J/F	1.34	3	10	6,486	21,619	I/Bk/H				BLM 98, Box 99, SVNRT, Golder		
SFCDR-P13	MSFCDR	OSB118	Osburn north tailings area					J/F	23.7	3	10	114,708	382,360	I/Bk/H				BLM 98, Box 99, SVNRT, Golder		
SFCDR-P14	MSFCDR	OSB119	Osburn Zanetti gravel operation	3,375 - 15,376	6,538 - 31,839	17 - 56	6 (MFG 96)	J/F	56.67			370,000	370,000	M/H				BLM 98, Box 99, MFG 96, SVNRT		
SFCDR-P15	LSFCDR	KLW112	Sweeney mill tailings pile					J	21.03	5	10	169,642	339,284	M/H		Y	Y	SAIC 93, BLM 98		
SFCDR-P16	LSFCDR	KLW039	Bunker Hill CIA	40 to 24,700	258 to 56,100	6.1 to 135	(D&M 90)	J/F	256.39			24,200,000	24,200,000	I/M/H	Y			BLM 98, Box 99, SAIC 93, D&M 90, MFG 92	Volume = 4 ft of underlying tailings (MFG 92) + impoundment; concentrations cover ranges cited in D&M 90 for "CIA flotation tailings" and "jig tailings". See "CIA volumes" worksheet for detailed breakdown of quantities.	
SFCDR-P17	LSFCDR	KLW040	BH gypsum impoundment					J/F	21.56			602,000	602,000	I/M/H				BLM 98, Box 99, SAIC 93, MFG 92	Volume = gypsum ponds A-1 and A-4 (MFG 92)	
SFCDR-P18	LSFCDR	KLW008	Page Pond	2,910 to 5,220	2,910 to 11,700	24.6 to 41.4	21 (D&M 90)	J/F	84.85			2,104,450	2,104,450	I/M/H	Y			BLM 98, Box 99, D&M 90, MFG 92, MFG 98	Volume = flotation tailings + dikes + stockpiled residential soils (MFG 92) + West Swamp tailings (MFG 98)	
								TOTALS:				696.8	34,405,315	34,966,851						
<b>Mill Sites</b>								J/F						M			SAIC 93	Historical mill site is probably obscured by current day features, possibly Lucky Friday rock dump.		
SFCDR-M01	USFCDR	(No BLM polygon)	Snowstorm Mill					J/F	1.4	1	5	2,259	11,293	M/H				SAIC 93, BLM 98		
SFCDR-M02	USFCDR	MUL131	National millsite					J/F	29	1	5	46,787	233,933	M/Bk/H				SAIC 93, BLM 98		
SFCDR-M03	USFCDR	MUL039	Lucky Friday Mine &																	

**Table A-8 Rev.1. South Fork Coeur d'Alene River tailings, mill sites and impoundments inventory.**

**Table A-9. Osburn tailings ponds volume inventory.**

Description	Volume (cy)	Date	Reference	Comments
Underlying 4 ft of jig tailings x area (66.24 acres)	427,469	Historical	D&M 79	0 to 6 ft in higher areas, 0 to 2 ft near the river.
550,000 tons at dam elevation 2,590 ft	339,506	Pre-1975	Crowell 75	Compare w/10 to 26 ft depth of tailings in disposal area (WC 76) x 15 acres = 435,600 cy
Berm elevation 2,610; pond area 15 acres	484,000	1979	D&M 79	Difference btwn elevations x 15 acres
1979 expansion: 4.4 million tons over 25 years, pro-rated for 20 years (to 1999)	2,172,840	1979-99	D&M 79	Compare with SAIC 93: 4,300,000 tons total to date
Osburn Flats removals	58,000	1998	SVNRT 98	
3,481,814 cy				
Rounded as: 3,500,000 cy				

**Table A-10 Rev.2. CIA volume inventory.**

Description	Volume (cy)	Date	Reference
Underlying 4 ft of jig tailings x area (256.39 acres)	1,654,570	Historical	MFG 92
Granulated slag - West Cell volume	1,300,000		MFG 92
Flotation tailings and dikes - East cell volume	11,900,000		MFG 92
Flotation tailings and dikes - Middle cell volume	4,100,000		MFG 92
Gypsum and dikes - Middle cell volume	2,300,000		MFG 92
Material accumulation on NW corner of E. cell	18,600		MFG 92
Material relocated to polishing pond	6,200		MFG 92
Material relocated to N. end of polishing pond	2,340		MFG 92
Material relocated to wastewater sludge cells	952		MFG 92
Wastewater treatment sludge in sludge cells	95,000		MFG 92
Denver Creek tailings	5,200	1996-97	CCJM 98
Liberal King tailings	7,000	1996-97	CCJM 98
Amy-Matchless tailings	12,000	1997	CCJM 98
Amy-Matchless tailings	1,500	1998	Fortier 99
Upper Constitution tailings	361	1998	Fortier 99
Red Cloud mill tailings	688	1998	Fortier 99
Osburn Flats removals	77,000	1998	SVNRT 98
Smelerville Flats removals	1,500,000	1998	IDEQ 99
Gulch and creek removals	761,000	1998	IDEQ 99
Dump removals	463,000	1998	IDEQ 99
Milo Creek removals	38,400	1998	IDEQ 99
		24,243,811	cy

Rounded as: 24,200,000 cy

**Table A-11. Adits Compilation**

RAP Reach	Data Source	Agency	Adit Name	Other ID	Peer Reviewed	Sample Date	Flow (cfs)	Hardness	Cd_D (µg/L)	Q	Cd_T (µg/L)	Q	Pb_D (µg/L)	Q	Pb_T (µg/L)	Q	Zn_D (µg/L)	Q	Zn_T (µg/L)	Q	Fe_D (µg/L)	Q	Fe_T (µg/L)	Q	Alkalinity (µg/L)	Q	Sulfate (µg/L)	pH
<b>Canyon Creek</b>																												
UCC	IGS	USFS	Blue Ribbon	B8139704	Yes	13-Aug-97	0.112		2.3	U	3	U			ND		2.5	U	3	U	4.1	U	12	U			7.3	
UCC	IGS	USFS	Mammoth	K08289703	Yes	28-Aug-97			2.3	U	4				6.5		2.5	U	3	U	3.7	U	12	U				
UCC	IGS	USFS	Champion Gold and Silver	B8139705	Yes	13-Aug-97			2.3	U	3	U			ND		2.5	U	3	U	4.2		22					
UCC	IGS	USFS	West Mammoth	B8139707	Yes	13-Aug-97			2.3	U	3	U			ND		2.5	U	32		3.7	U	12	U				
UCC	DOJ Files	Hecla	Gertie Tunnel		Yes	4-Mar-91	~0.557		4	U	4	U	30	U	30	U	20	U	20	U	100	U	100	U			7.6	
MCC	DOJ Files	Hecla	Hercules No. 5		Yes	12-Feb-91	-1.34		4	U	4	U	30	U	30	U	84		164		100	U	338				7.9	
MCC	URSG TDM	SVNRT	Hercules No. 5	CC-388	Yes	18-May-91	2.75		64.3		66		308		838		6550		6320									6.21
MCC	URSG TDM	SVNRT	Hercules No. 5	CC-388	Yes	5-Oct-91	0.79		0.3		0.6		0.1	U	6		12	U	91									7.88
MCC	URSG TDM	EPA NPDES	Hercules No. 5	CC-388	Yes	2-Apr-96							5	U			21.7		422									
MCC	OFR98-127	USGS	Hercules No. 5		Yes	Aug-96	2.6	130	0.65		0.99		0.54		8.7		103		115		10	U	250		122,500		25,000	7.75
MCC	OFR98-127	USGS	Hercules No. 5		Yes	Jun-97	3.0	117	32		32		223		527		2510		2650		10	U	460		79,000		39,000	7.58
MCC	URSG TDM	EPA RI/FS	Hercules No. 5	CC-388	Yes	17-Nov-97	1.35	111	3.15		2.9		2.12		11.8		277		298		10	U	146		94,100		23,300	7.86
MCC	URSG TDM	EPA RI/FS	Hercules No. 5	CC-388	Yes	12-May-98	1.92	113	26		26.2		81.9		49		2120		2210		20	U	310		83,000		39,100	7.27
MCC	URSG TDM	EPA RI/FS	Hidden Treasure	CC-354	Yes	13-May-98	1.44	80.6	1.5		3.1		0.2		17.4		363		392		40		1830		77,000		8500	6.97
MCC	DOJ Files	Hecla	Hecla No. 3		Yes	29-Aug-91	~0.334		4	U	4	U	30	U	30	U	41		63		505		12,900					7.71
MCC	URSG TDM	EPA RI/FS	Anchor	CC-373	Yes	16-Nov-97	0.00807	62.8	0.04	U	0.069	U	0.88		1.6		7.08		22.2	U	10	U	220		54,600		10,400	
MCC	DOJ Files	Hecla	Tamarack No. 7		Yes	12-Feb-91	-1.11		4	U	4	U	30	U	30	U	590		647		100	U	517					7.5
MCC	URSG TDM	SVNRT	Tamarack No. 7	CC-372	Yes	17-May-91	3.15		5.1		9.2		3	U	1720		1730											7.01
MCC	URSG TDM	SVNRT	Tamarack No. 7	CC-372	Yes	5-Oct-91	1.61		1.4		3.5		0.1	U	5		501		639									6.84
MCC	OFR98-127	USGS	Tamarack No. 7		Yes	Aug-96		115	2		4.2		0.06		15		632		650		62		760		90,500		22,000	7.51
MCC	OFR98-127	USGS	Tamarack No. 7		Yes	Jun-97	2.0	122	9.2		16		0.21		10		2800		2910		10		680		79,500		39,000	7.5
MCC	URSG TDM	EPA RI/FS	Tamarack No. 7	CC-372	Yes	16-Nov-97	0.011	113	1.31		3.3		0.13		4		586		633		34.8		461		83,900		21,200	
MCC	URSG TDM	EPA RI/FS	Tamarack No. 7	CC-372	Yes	12-May-98		121	16.6		18.1		0.5	U	5		2790		2850		369		653		79,400		49,200	7.11
MCC	URSG TDM	EPA RI/FS	Black Bear Fraction	CC-371	Yes	16-Nov-97	1.13	45.2	0.53		0.49		2.23		2.6		88.6		90.6		10	U	9.8	U	41,400		4490	
MCC	URSG TDM	SVNRT	Gem No. 3	CC-355	Yes	17-May-91	0.2		9.1		11		3	U	30		17,300		16,000									6.95
MCC	URSG TDM	SVNRT	Gem No. 3	CC-355	Yes	5-Oct-91	0.25		7.5		7.5		0.1	U	40		14,100		13,800									6.76
MCC	OFR98-127	USGS	Gem No. 3		Yes	Aug-96		178	9.6		11		0.12		23		16,300		16,200		4120		6800		116,000		92,000	6.98
MCC	ASARCO	EPA AOC	Gem No. 3		Yes	24-Feb-97		151	18.9		18.7		40	U	60		22,000		19,700		5650		6600		103,000		111,000	6.13
MCC	ASARCO	EPA AOC	Gem No. 3		Yes	28-Mar-97		141	35.3		30.9		40	U	90		25,700		21,900		4650		6250		92,000		122,000	6.38
MCC	ASARCO	EPA AOC	Gem No. 3		Yes	25-Apr-97		170	29.3		26.4		40	U	70		26,400		26,700		4730		5750		94,100		122,000	6.32
MCC	ASARCO	EPA AOC	Gem No. 3		Yes	Jun-97	1.0	185	17		0.07		21		18,030		18,500		1520		4500		105,000		99,000	7.1		
MCC	ASARCO	EPA AOC	Gem No. 3		Yes	3-Jun-97		193	20.4		20.8		40	U	40		18,700		17,600		3910		310,000		109,000	5.95		
MCC	ASARCO	EPA AOC	Gem No. 3		Yes	2-Jul-97	0.691	181	11.6		11.3		40	U	40		17,300		14,600		2750		3960		105,000		104,000	6.47
MCC	ASARCO	EPA AOC	Gem No. 3		Yes	4-Aug-97	0.316	175	11		20		40	U	40		14,400		13									

**Table A-11. Adits Compilation**

RAP Reach EFPC	Data Source	Agency	Adit Name	Other ID	Peer Reviewed	Sample Date	Flow (cfs)	Hardness	Cd_D (µg/L)	Q	Cd_T (µg/L)	Q	Pb_D (µg/L)	Q	Pb_T (µg/L)	Q	Zn_D (µg/L)	Q	Zn_T (µg/L)	Q	Fe_D (µg/L)	Q	Fe_T (µg/L)	Q	Alkalinity (µg/L)	Q	Sulfate (µg/L)	Q	pH		
TPC	URSG TDM	EPA	Nevada Stewart Mine	PC-335	Yes	14-Nov-97	0.111	508	0.44	0.27 J	0.31	1.7	10700	J	15	3350	117,000	384000										7.12			
TPC	URSG TDM	EPA	Nevada Stewart Mine	PC-335	Yes	10-May-98	0.036	470	0.5 JJ	0.5 J	1.1 U	1.6	8720	J	543	1250 J	120,000	410000	7.44												
TPC	USBM	BLM	Nevada-Stewart	AD008	Yes	Jun-93		485	ND	ND	5.73	5.90	10,100	J	664	649	140,000	311,000	6.80												
TPC	USBM	BLM	Nevada-Stewart	AD008	Yes	Aug-93		653	1		1.4		9950		403														6.87		
TPC	CCJM 98	BLM	Nabob Adit (Nabob Millsite)	NAB-SW-5	Yes	15-Jul-94	0.019	298		5.6		119		3530														8.77			
TPC	URSG TDM	EPA	Nabob 1300 Level	PC-343	Yes	15-Nov-97	0.074	598	7.35	7.6	0.13	8.5	10100	J	10 U	734	131,000	491,000													
TPC	URSG TDM	EPA	Nabob 1300 Level	PC-343	Yes	11-May-98	0.0608	535	8	8.2	0.2 U	0.6	8310	J	31	90	135,000	447,000	7.34												
TPC	USBM	BLM	Nabob Tunnel	AD002	Yes	Jun-93		433	14.0	17.1	ND	1.90	7190	J	7430	32.4	60.3		319,000	7.70											
TPC	USBM	BLM	Nabob Tunnel	AD002	Yes	Aug-93		305	ND		1.5		683			11		155,000	133,700	8.27											
TPC	CCJM 98	BLM	Highland-Surprise Adit (Highland-Surprise Millsite)	HIL-SW-6	Yes	16-Jul-94		193		2.9		4.2		1690	J		220											7.57			
TPC	USBM	BLM	Highland-Surprise	AD009	Yes	Jun-93		9.0	10.0	11.1	11.3	5790	6050	328	353	160,000	171,000	7.50													
TPC	USBM	BLM	Highland-Surprise	AD009	Yes	Aug-93		219	ND		ND	2650			8.1		143,000	64,300	7.54												
TPC	URSG TDM	EPA	Highland-Surprise Mine and Millsite	PC-336	Yes	14-Nov-97	0.036	197	0.83	3.4	0.17	10.7	1250	J	10 U	412	119,000	68100													
TPC	URSG TDM	EPA	Highland-Surprise Mine and Millsite	PC-336	Yes	10-May-98	0.04	196	0.6 J	3.3 J	0.1 U	3 J	2010	J	2190	215 J	396 J	130,000	81000	7.77											
EFPC	USBM	BLM	Lookout Mountain	AD001	Yes	Jun-93		176	ND	ND	ND	39.4		41.9		17.0	16.0	61,000	111,000	7.80											
EFPC	USBM	BLM	Lookout Mountain	AD001	Yes	Aug-93		180	ND		ND	61					ND		205,000	84,200	7.2										
EFPC	URSG TDM	EPA	Lookout Mountain Mine	PC-332	Yes	14-Nov-97	0.0266	182	1.37	1.3	0.41	0.83	57		61.5 J	10 U	27.1 U	138,000	51900												
EFPC	URSG TDM	EPA	Lookout Mountain Mine	PC-332	Yes	10-May-98	0.027	172	0.8 J	1 J	0.8 U	0.6 U	39.4		44.9	171 J	234	130,000	52000	8.25											
TPC	CCJM 98	BLM	Sidney Adit (Sidney Millsite)	SID-SW-4	Yes	15-Jul-94	0.0011	159		19.0		22.6		5110			73.7											8.2			
TPC	BLM	BLM	Sidney Tunnel (Red Cloud)	BLMSG-001	Yes	30-Apr-97	0.089			238		385		164000																	
TPC	BLM	BLM	Sidney Adit	BLMSS-001	Yes	8-Aug-97				33		170		17400														7.81			
TPC	BLM	BLM	Sidney Adit	BLMSS-001	Yes	28-Oct-97				20 U		41		5080														7.74			
TPC	BLM	BLM	Sidney Adit	BLMSS-001	Yes	27-Jan-98				8.4		47		3880														7.35			
TPC	BLM	BLM	Sidney Adit	BLMSS-001	Yes	5-May-98				140		25		69000														7.2			
TPC	BLM	BLM	Sidney Adit	BLMSS-001	Yes	5-Aug-98	0.0028			140		5 U		13110														7.2			
TPC	BLM	BLM	Sidney Adit	BLMSS-001	Yes	30-Nov-98	0.00047			15		1490		9560														7.5			
TPC	URSG TDM	EPA	Sidney (Red Cloud) Mine and Millsite	PC-337	Yes	15-Nov-97	0.0027	155	10.8	10	19.3	141	4850	J	10 U	330	90,100	70000													
TPC	URSG TDM	EPA	Sidney (Red Cloud) Mine and Millsite	PC-337	Yes	10-May-98	0.01	224	135 J	167	20 J	163	9.1 U	0.9 U	213 J	590 J	66,000	290000	7.12												
TPC	USBM	BLM	Sydney-Red Cloud	AD007	Yes	Jun-93		465	423	385	349	164	167,000		144,000	581	45,000	271,000	271,000	7.10											
TPC	USBM	BLM	Sydney-Red Cloud	AD007	Yes	Aug-93		170	24.3		16.9		8450			7.5		79,600	79,600	79,600	7.86										
MSPC	CCJM 98	BLM	Amy Adit (Amy-Matchless Millsite)	AMY-SW-1	Yes	15-Jul-94	0.0033	246		0.3 U		1.0 U		90.4			235											7.2			
MSPC	BLM	BLM	Amy Mine Tunnel Adit	BLMAS-002	Yes	30-Apr-97	0.089			0.8		7		197													7.25				
MSPC	BLM	BLM	Amy Mine Tunnel Adit	BLMAS-002	Yes	8-Aug-97				0.5 U		5 U		126													6.25				
MSPC	BLM	BLM	Amy Mine Tunnel Adit	BLMAS-002	Yes	28-Oct-97				20 U				5 U		10 U															
MSPC	URSG TDM	EPA	Amy-Matchless Millsite	PC-330	Yes	13-Nov-97	0.00124	270	0.53	0.72	0.12	3.4	349		438	13	891	208,000	67900												
MSPC	URSG TDM	EPA	Amy-Matchless Millsite	PC-330	Yes	12-May-98	0.00821																								

**Table A-11. Adits Compilation**

RAP Reach	Data Source	Agency	Adit Name	Other ID	Peer Reviewed	Sample Date	Flow (cfs)	Hardness	Cd_D (µg/L)	Cd_T (µg/L)	Pb_D (µg/L)	Pb_T (µg/L)	Zn_D (µg/L)	Zn_T (µg/L)	Fe_D (µg/L)	Fe_T (µg/L)	Alkalinity (µg/L)	Sulfate (µg/L)	pH					
USFCDR	URSG TDM	EPA RI/FS	Unnamed Adit [Deadman Gl. east of National]	SF-389	Yes	19-Nov-97	0.007	64.5	0.038	0.48	0.19	30.1	7.2	51.3	18	1130	65000	3570						
USFCDR	IGS	USFS	National Copper No. 2	B7299701	Yes	29-Jul-97			2.3	U	5		ND	2.5	U	3	U	12	U	7.08				
USFCDR	IGS	USFS	National Copper Lower Adit	B7299705	Yes	29-Jul-97	0.007		3.4	U	6		ND	2.5	U	3	U	8	U	8				
USFCDR	DOJ Files	Hecla	National [National Copper No.1?]		Yes	15-Aug-91	~0.187		4	U	4	U	30	U	34	23	35	24	83		7.32			
USFCDR	URSG TDM	EPA RI/FS	Copper King	SF-339	Yes	17-May-98	0.0564	35.1				2.4	J	169	10	J	40.4	69.8	567	37,000	1500	6.14		
USFCDR	IGS	USFS	Copper King (Main Adit)	B7299703	Yes	29-Jul-97	0.112		2.3	U	4		ND	2.5	U	3	U	3.7	U	12	U	9.3		
USFCDR	IGS	USFS	Reindeer Queen	B8059704	Yes	5-Aug-97	0.004		2.3	U	8		ND	2.5	U	3	U	3.7	U	12	U	8		
USFCDR	URSG TDM	EPA RI/FS	Reindeer Queen	SF-390	Yes	19-Nov-97	0.011	68.3	0.02	U	0.069	U	0.062	0.17	J	1.2	12.1	U	10	U	43.1	70,200	4970	
USFCDR	IGS	USFS	Little Giant	B8059702	Yes	5-Aug-97	>0.0223		2.3	U	8		ND	2.5	U	3	U	50	220			6.9		
USFCDR	URSG TDM	EPA RI/FS	Atlas	SF-342	Yes	18-May-98	0	69.3	2.4	2.5	1.1		3.1	190	201	20	U	48.5	48,000	19,300	7.57			
USFCDR	DOJ Files	Hecla	Fanny Gremm		Yes	5-Sep-91			4	U	4	U	30	U	30	U	40	40	10	U	10	U	7.56	
USFCDR	DOJ Files	Hecla	U-Like [You-Like]		Yes	28-Aug-91			8	U	9		30	U	30	U	1980	2310	78		111		7.38	
USFCDR	DOJ Files	Hecla	Morning No. 4 (Midnight)		Yes	[undated]			4	U	4	U	30	U	30	U	168	225	38		76		7.33	
USFCDR	DOJ Files	Hecla	Morning No. 4 (Lower adit)		Yes	[undated]			4	U	4	U	30	U	30	U	101	115	6440	10,000			7.18	
USFCDR	URSG TDM	EPA RI/FS	Morning No.4	SF-345	Yes	17-May-98	0.0152	32.5	15.1	16.4	68.7	76.9	2550	2510	20	U	20	U	600	24,700	6.23			
USFCDR	DOJ Files	Hecla	Morning No. 5 (1700 Level)		Yes	28-Aug-91			4	U	4	U	30	U	30	U	769	888	115	151			7.56	
USFCDR	OFR98-127	USGS	Morning No. 5		Yes	Aug-96	0.065	220	0.58	0.59	0.41		67	401	398	10		55		83,500	130,000		7.03	
USFCDR	OFR98-127	USGS	Morning No. 5		Yes	Jun-97	0.088	195	45	45	0.06	4.1	4270	4325	10		185		59,000	140,000		7.57		
USFCDR	URSG TDM	EPA RI/FS	Morning No. 5	SF-346	Yes	17-May-98	0.0111	217	5	5.7	0.2	0.9	808	851	25		98		80,000	123,000		7.52		
USFCDR	DOJ Files	Hecla	Morning No. 6		Yes	12-Feb-91			4	U	4	U	32	30	U	20	U	140	100	U	100	U	8.0	
USFCDR	URSG TDM	SVNRT	Morning No. 6	SF-394	Yes	15-May-91	0.6		0.7	0.9	3	U	3	20	U	126					8.26			
USFCDR	URSG TDM	SVNRT	Morning No. 6	SF-394	Yes	4-Oct-91	0.92		0.4	0.5	1	U	5	12	U	83					7.74			
USFCDR	URSG TDM	EPA RI/FS	Morning No. 6	SF-394	Yes	20-Nov-97	1.35	640	0.041	0.069	U	0.12	2	24.9	38.1	U	10	U	164	296,000	335,000			
USFCDR	URSG TDM	EPA RI/FS	Morning No. 6	SF-394	Yes	17-May-98	1.85	667	1.1	1.7	0.5	9.2	314	317	51	400		262,000	333,000		8.12			
USFCDR	DOJ Files	Hecla	Star 1200 Level		Yes	23-Aug-91	~0.167		20	22	30	U	67	2610	3020	87		90			7.05			
USFCDR	URSG TDM	EPA RI/FS	Star 1200 Level	SF-347	Yes	17-May-98	0.695	52.7	72.3	73.2	589	666	11200	11000	24		64		22,000	42,800		6.57		
USFCDR	URSG TDM	EPA RI/FS	Grouse	SF-349	Yes	17-May-98	1.82	4.7	0.8	0.8	34.2	35	73	84	20	U	20	U	2000	600		6.17		
USFCDR	URSG TDM	EPA RI/FS	Alice	SF-350	Yes	18-May-98	0	70.8	0.1	U	0.1	U	0.5	U	5	U	5	U	20	U	57,000	5460		7.66
USFCDR	URSG TDM	EPA RI/FS	Square Deal	SF-396	Yes	20-Nov-97	0.134	19.3	0.02	U	0.069	U	0.26	0.62	5.93	11.7	U	10	U	5.9	15,800	3680		6.7
USFCDR	URSG TDM	EPA RI/FS	Square Deal	SF-396	Yes	19-May-98	0.021	15	0.041	U	0.041	U	0.12	J	0.84	5.8	J	1.1		22.4	40.6	14,000	3900	
USFCDR	URSG TDM	EPA RI/FS	Golconda	SF-395	Yes	20-Nov-97	0.022	175	0.02	U	0.069	U	0.68	32.2	6.71	29	U	53.6	1380	161,000	8240		7.99	
USFCDR	URSG TDM	EPA RI/FS	Golconda	SF-395	Yes	18-May-98	0.0388	177	0.1	U	0.1	U	0.5	U	16.6	5	U	17.7	20	U	910	168,000	9380	
MSFCDR	DOJ Files	Hecla	Vienna No. 1		Yes	21-Aug-91	~0.167		4	U	4	U	30	U	20	U	20	U	47	70			7.52	
MSFCDR	IGS	USFS	Osakis [Vienna] No. 1	K09029701	Yes	2-Sep-97			4.1	U	3	U	ND	2.5	U	32	9.1	43						
MSFCDR	DOJ Files	Hecla	Vienna No. 2		Yes	21-Aug-91	~0.022		4	U	4	U	30	U	20	U	31	45	45			7.45		
MSFCDR	IGS	USFS	Osakis [Vienna] No. 2	K09029702	Yes	2-Sep-97			5	U	3	U	ND	2.5	U	3	U	7.2	12	U				
MSFCDR	DOJ Files	Hecla	Vienna No. 3		Yes	21-Aug-91	~0.167		4	U	4	U	30	U	20	U	20	U	36	37			7.59	
MSFCDR	DOJ Files	Hecla	Western Union [Lower Adit?]		Yes	12-Feb-91			4	U	4	U	30	U	30	U	20	U	100	U	368		7.6	
MSFCDR	URSG TDM	EPA RI/FS	Western Union Lower Adit	SF-393	Yes	17-Nov-97	0.002	342	0.033	0.15	U	0.52	21.4	11	54.2	U	10	U	3800					

Table A-12 Rev.1. Adits Inventory.									
Note: Only page one is modified by this revision; subsequent pages remain unchanged.									
RAP Reach	BLM Polygon	Tributary	Mine Name	Adit Names	# of Adits	Producer?	# Adits w/ Discharge	# Adits w/ WQ Samples	Sampled By
<b>South Fork Coeur d'Alene River</b>									
USFCDR	LOK019	Unnamed	Princeton-Magna	Princeton-Magna	1		1	1	USFS; URSG
USFCDR	LOK017	Unnamed	Beacon Light	Beacon Light No. 2	4		1	1	USFS
USFCDR	LOK028	Unnamed	No Name	No Name	1		1	1	USFS
USFCDR	LOK009, 011, 012, 013	Daisy Gulch	Snowstorm	Snowstorm No. 1, 2, 3, 4	4	Y	1	1	Hecla; USGS; USFS; URSG
USFCDR	LOK008	Daisy Gulch	Idaho Silver	Idaho Silver	1	Y	1		
USFCDR	LOK001, 002	Gentle Annie Gulch	Lucky Calumet	Lucky Calumet No. 1, 2	2		1	1	USFS
USFCDR	LOK003, 004	Gentle Annie Gulch	Snowshoe	Snowshoe No. 1, 2	2		1	1	USFS
USFCDR	LOK007	Gentle Annie Gulch	Butte & Coeur d'Alene	Butte & Coeur d'Alene	1	Y			
USFCDR	MUL055	SFCDR	Vindicator	Vindicator	1	Y			
USFCDR		Deadman Gulch	Unnamed	Unnamed adit	1		1	1	URSG
USFCDR	MUL053, 103	Deadman Gulch	National Copper	National No. 1, 2, 3; Missoula Tunnel; upper adit	5	Y	3	2	Hecla; USFS
USFCDR	MUL052	Deadman Gulch	Copper King	Copper King No. 1, 2, Main	3		1	1	USFS; URSG
USFCDR	MUL081	Willow Creek	Reindeer Queen	Reindeer Queen	1	Y	1	1	USFS; URSG
USFCDR	MUL072	Unnamed	Little Giant	Little Giant	1		1	1	USFS
USFCDR	MUL071, 073, 118	Unnamed; Willow Ck; Boulder Ck	Atlas	Atlas, Carbonate Hill, Upper Giant	3	Y	1	1	URSG
USFCDR	MUL039	SFCDR	Lucky Friday	Lucky Friday (multiple)	2	Y			
USFCDR	MUL039, 042	Gold Hunter Gulch	Gold Hunter	Gold Hunter No. 5, 6	2	Y			
USFCDR	MUL024, 025	Mill Creek	You-Like	You-Like	1		1		Hecla
USFCDR	MUL023	Mill Creek	Fanny Gremm	Fanny Gremm	1		1	1	Hecla
USFCDR	MUL026, 146, 027, 148, 028, 019	Mill Creek; SFCDR	Morning	Morning No. 1, 2, 3, 4, 5, 6	6	Y	3	3	Hecla; MFG; USGS; URSG
USFCDR	MUL012	Grouse Gulch	Star	Star 1200 Level	1	Y	1	1	URSG; Hecla
USFCDR	MUL013	Grouse Gulch	We-Like	We-Like	1		1		
USFCDR	MUL014	Grouse Gulch	Grouse	Grouse	1		1	1	URSG
USFCDR	MUL008	Ruddy Gulch	Alice	Alice	1	Y		1	URSG
USFCDR	MUL006	Trowbridge Gulch	Square Deal	Square Deal	1		1	1	URSG
USFCDR	MUL001, 003	SFCDR; Trowbridge Gl.	Golconda	Golconda, Mayflower	2	Y	1	1	URSG
				<b>SUBTOTAL, USFCDR:</b>	<b>50</b>		<b>25</b>	<b>22</b>	
MSFCDR	MUL085	Placer Creek	Osakis (Vienna)	Osakis (Vienna) No. 1, 2, 3	3		3	3	Hecla; USFS
MSFCDR	WAL020	Daly Gulch; Placer Ck.	Caladay	Caladay (multiple)	2		1		
MSFCDR	WAL018	Lake Creek	Galena	Galena No. 6	1	Y			
MSFCDR	OSB072, WAL002	Nuckols Gl; Revenue Gl.	Western Union	Upper Adit, Lower Adit	2	Y	1	1	URSG; Hecla
MSFCDR	WAL016	Argentine Gulch	Argentine	Argentine	1	Y			
MSFCDR	WAL015	Shields Gulch	Rainbow	Rainbow (multiple)	2	Y	1	1	URSG
MSFCDR		Two Mile Creek	Unnamed Location	Unnamed	1		1	1	USFS

**Table A-12 Rev.1. Adits Inventory.**

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RAP Reach	BLM Polygon	Tributary	Mine Name	Adit Names	# of Adits	Producer?	# Adits w/ Discharge	# Adits w/ WQ Samples	Sampled By
MSFCDR	OSB080	Two Mile Creek	Hudlow	Hudlow	1		1	1	USFS
MSFCDR	OSB079	Two Mile Creek	Capitol Silver	Capitol Silver Main Adit	2		1	1	URSG
MSFCDR		Two Mile Creek	May Claim Prospect	May Claim adit	1		1	1	USFS
MSFCDR	POL019	McFarren Gulch	Coeur d'Alene (Mineral Point)	Coeur d'Alene	1	Y	1	1	URSG
MSFCDR	KLE017	SFCDR	Evolution	Evolution	1	Y			
MSFCDR	OSB074, KLE067, 069	Terror Gulch	St. Joe Quartz Prospect	St. Joe No. 1, 2, 3, 4	7		4	4	USGS; URSG
MSFCDR	KLE035	Rosebud Gulch	Silver Summit/Con Silver	Silver Summit	1	Y	1	1	Hecla
MSFCDR	KLE034	SFCDR	Silver Dollar	Silver Dollar	1		1	1	USGS; URSG
MSFCDR	KLE033	Polaris Gulch	Polaris	Polaris	1	Y			
MSFCDR	POL004	Big Creek, West Fork	Bismarck	Bismarck	1		1	1	USFS
MSFCDR		Big Creek, West Fork	Unnamed Location	Unnamed	1		1	1	USFS
MSFCDR	POL002	Big Creek, West Fork	Silver Dale and Big Hill	Silver Dale and Big Hill No. 1	2		1	1	USFS
MSFCDR		Big Creek, West Fork	Unnamed Location	Unnamed	1		1	1	USFS
MSFCDR		Big Creek, West Fork	Unnamed Location	Unnamed	1		1	1	USFS
MSFCDR	POL001	Big Creek, West Fork	Rockford Group	Rockford No. 1	2		1	1	USFS
MSFCDR	POL024	Big Creek, East Fork	Royal Apex	Royal Apex	1		1	1	USFS
MSFCDR		Big Creek	Idaho Leadville Prospect	Idaho Leadville	1		1	1	USFS
MSFCDR	POL022	Big Creek	National	National	1		1	1	USFS
MSFCDR		Big Creek	Unnamed Location	Unnamed	1		1	1	USFS
MSFCDR	KLE031, 030	Big Creek	Sunshine	Sunshine	7	Y			
MSFCDR	KLE054	Big Creek	Crescent	Hooper Tunnel (multiple)	4	Y	1	1	USGS
MSFCDR	KLE078	Moon Creek	Charles Dickens	Charles Dickens	3	Y	2	2	BOM
MSFCDR	KLE076	Moon Creek	Silver Crescent	Silver Crescent	1		1	1	BOM; USFS
MSFCDR	KLE020	Elk Creek	New Hilarity	New Hilarity	1	Y			
MSFCDR	KLE021	Elk Creek	Alhambra	Alhambra	1	Y			
				SUBTOTAL, MSFCDR:	57		31	30	
LFCDR		SFCDR	Bunker Hill	Kellogg Tunnel	1	Y	1	1	USGS; EPA
LFCDR	No adits have been inventoried for this reach								
				SUBTOTAL, LCDR:	1		1	1	
<b>Canyon Creek</b>									
UCC	THO018	Unnamed	Blue Ribbon Group	Blue Ribbon	1		1	1	USFS
UCC		Canyon Creek	Mammoth	Mammoth	1		1	1	USFS
UCC	BUR188	Military Gulch	Champion Gold and Silver	Champion Gold and Silver	1		1	1	USFS
UCC	BUR185	Military Gulch	West Mammoth	West Mammoth	1		1	1	USFS
UCC	BUR109, 105	French Gulch	Oom Paul	Oom Paul No. 1, 2	2		1		
UCC	BUR107	Canyon Creek	Ajax	Ajax No. 3	1	Y	1?		
UCC	BUR134	Sawmill Gulch	Imperial/Alcides	Imperial, Alcides	2		2		
UCC	BUR132	Canyon Creek	Gertie	Gertie Tunnel	1		1	1	Hecla
UCC	BUR130	O'Neill Gulch	Marsh	Marsh No. 1, 2	2	Y	0		

**Table A-12 Rev.1. Adits Inventory.**

Note: Only page one is modified by this revision; subsequent pages remain unchanged.

RAP Reach	BLM Polygon	Tributary	Mine Name	Adit Names	# of Adits	Producer?	# Adits w/ Discharge	# Adits w/ WQ Samples	Sampled By
				SUBTOTAL, UCC:	12		9	5	
GG	BUR165	Gorge Gulch	Honolulu	Honolulu	1	Y			
GG	BUR088	Gorge Gulch	Ajax	Ajax No. 2	1	Y	1		
GG	BUR099	Gorge Gulch	Benton	Benton	1	Y			
GG	BUR180	Gorge Gulch	Stanley	Stanley	1	Y			
GG	BUR092	Gorge Gulch	Fairview/Wide West	Fairview/Wide West	1	Y			
GG	BUR085, 086, 087, 090	Gorge Gulch	Hercules	Hercules No. 1, 2, 3, 4	4	Y	2		
				SUBTOTAL, GG:	9		3	0	
MCC	BUR098	Canyon Creek	Hercules	Hercules No. 5	1	Y	1	1	MFG; Hecla; USGS; URSG; NPDES
MCC	BUR093	Canyon Creek	Hummingbird	Hummingbird No. 4	1	Y			
MCC	BUR097	Canyon Creek	Tiger-Poorman et al.	Hidden Treasure	1	Y	1	1	URSG
MCC	BUR128	Canyon Creek	Hecla/Star	Hecla No. 3/Star Tunnel, No.2, 3	3	Y	1	1	Hecla
MCC	BUR096	Canyon Creek	Anchor	Anchor	1	Y	1	1	URSG
MCC	BUR076, 094, 075	Canyon Creek	Sherman	Sherman 1500, 600, Oreano Adit (1000)	3	Y	1		
MCC	BUR073, 070, 069, 071, 072, 074	Canyon Creek	Standard-Mammoth	Campbell Adit, No. 1, 2, 3, 4, 5	6	Y			
MCC	BUR123	Canyon Creek	Great Eastern	Great Eastern	1		1		
MCC	BUR067	Canyon Creek	Tamarack-Custer	Tamarack No. 7	1	Y	1	1	MFG; Hecla; USGS; URSG
MCC	BUR121	Canyon Creek	Blackbear Fraction	Blackbear Fraction	1	Y	1	1	URSG
MCC	BUR194, 193, 119	Canyon Creek	Blackbear	Blackbear No. 2, 3, 4	3	Y			
MCC	BUR118, 191	Canyon Creek	Frisco	Frisco No.1, 2, 3	3	Y			
MCC	BUR 112, 190	Canyon Creek	Gem	Gem No. 1, 2, 3	3	Y	2	1	MFG; USGS; URSG; ASARCO
MCC	BUR114	Bell Gulch	West Star	West Star	1		1		
				SUBTOTAL, MCC:	29		11	7	
LCC	WAL011	Canyon Creek	Canyon Silver-Formosa	Canyon Silver-Formosa	1	Y	1	1	URSG
LCC	WAL008	Canyon Creek	Sisters	Sisters (multiple)	3	Y			
				SUBTOTAL, LCC:	4		1	1	
<b>Nine Mile Creek</b>									
UEFNM	BUR051	East Fork Nine Mile	Sunset	Sunset Tunnel	1	Y	1	1	URSG
UEFNM	BUR083	East Fork Nine Mile	Ambergris	Ambergris	1	Y			
UEFNM	BUR084	East Fork Nine Mile	Hercules	Hercules No. 2	1	Y			
UEFNM	BUR053	East Fork Nine Mile	Interstate-Callahan	Interstate-Callahan No. 4	1	Y	1	1	MFG; Hecla; USGS; URSG
				SUBTOTAL, UEFNM:	4		2	2	

**Table A-12 Rev.1. Adits Inventory.**

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RAP Reach	BLM Polygon	Tributary	Mine Name	Adit Names	# of Adits	Producer?	# Adits w/ Discharge	# Adits w/ WQ Samples	Sampled By
EFNM	BUR170, 059, 058, 057, 171, 172	East Fork Nine Mile	Tamarack-Custer	Tamarack 400 Level, No. 1, 2, 3, 4, 5, unnamed	7	Y	3	2	Hecla; URSG
EFNM	BUR139, 054	East Fork Nine Mile	Rex	Rex No. 1, 2	2	Y	1	1	Hecla; USGS; URSG; NPDES
EFNM	BUR061, 060, OSB089, 088	East Fork Nine Mile	Success	Success No. 1, 2, 3; Alameda	3	Y	2	1	USGS; URSG
				<b>SUBTOTAL, EFNM:</b>	<b>12</b>		<b>6</b>	<b>4</b>	
MSNM	OSB039	Nine Mile Main Stem	Dayrock	Dayrock Main Level, 100 Level	2	Y	2	2	Hecla; URSG
MSNM	OSB038	Blackcloud	California	California	1	Y			
MSNM	OSB082	Blackcloud	Monarch	Monarch	1	Y			
MSNM	OSB083	Blackcloud	Monarch?	Ruth	1	Y			
MSNM	OSB032	Blackcloud	Monarch?	Duluth	1	Y	1	1	URSG
MSNM	OSB055	Nine Mile Main Stem	Silver Star	Silver Star	1		1	1	URSG
				<b>SUBTOTAL, MSNM:</b>	<b>7</b>		<b>4</b>	<b>4</b>	
<b>Pine Creek</b>									
EFPC	MAS050, 027	East Fork Pine Creek	Constitution	Upper Adit	1	Y	1	1	BOM; CCJM; URSG
EFPC	MAS052	East Fork Pine Creek	Owl Prospect	Owl	1		1	1	BOM
EFPC	MAS025	East Fork Pine Creek	Douglas	Main Adit	1	Y	1	1	EPA
EFPC	MAS054	East Fork Pine Creek	SF Fraction	S.F. Fraction	1		1	1	BOM; URSG
EFPC	MAS004	East Fork Pine Creek	Lookout Mountain	Tunnel No. 3	1	Y	1	1	BOM; URSG
				<b>SUBTOTAL, EFPC:</b>	<b>5</b>		<b>5</b>	<b>5</b>	
TPC	MAS023	Dry Gulch	Blue Eagle	Blue Eagle	1		1	1	BOM
TPC	MAS078	Highland Creek	Highland Surprise	Highland Surprise	1	Y	1	1	BOM; CCJM; URSG
TPC	MAS021	Highland Creek	Nevada-Stewart	Lower Adit	1	Y	1	1	BOM; URSG
TPC	MAS081	Red Cloud Creek	Sydney	Red Cloud Creek Adit	1	Y	1	1	BOM; CCJM; BLM; URSG
TPC	MAS017	Denver Creek	Sydney	Denver Creek Adit	1	Y	1	1	BOM
TPC	MAS016	Denver Creek	Little Pittsburgh	Upper Adit, Lower Adit, Unnamed adit	3	Y	3	3	BOM; URSG
TPC	MAS014	Denver Creek	Hilarity	Hilarity	1	Y	1	1	BOM
TPC	MAS029	Trapper Creek	Big It	Big It 1?	1	Y	1	1	URSG
TPC	MAS010, 011	Nabob Creek	Idaho Prospect	Idaho Prospect	1		1	1	URSG
TPC	MAS012	Nabob Creek	Lynch-Pine Creek	Lynch	1	Y	1	1	BOM
TPC	MAS007	Nabob Creek	Nabob	1300 Level (Nabob Tunnel)	1	Y	1	1	BOM; CCJM; URSG
TPC		Lynch Creek	Unnamed Location	Unnamed	1	Y	1	1	BOM
TPC	MAS009	Lynch Creek	Shetland	Shetland (Nabob Silver-Lead)	1		1	1	URSG
				<b>SUBTOTAL, TPC:</b>	<b>15</b>		<b>15</b>	<b>15</b>	
MSPC	MAS003	Pine Creek Main Stem	Liberal King	Liberal King	1	Y	1	1	BLM; CCJM; URSG

**Table A-12 Rev.1. Adits Inventory.**

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RAP Reach	BLM Polygon	Tributary	Mine Name	Adit Names	# of Adits	Producer?	# Adits w/ Discharge	# Adits w/ WQ Samples	Sampled By
MSPC	KLW081	Pine Creek Main Stem	Amy-Matchless	Amy	1	Y	1	1	CCJM; URSG
				SUBTOTAL, MSPC:	2		2	2	
		Notes:							
		• Adits listed in downstream order (in general)							
		• All adits for mines w/ associated production are listed whether known to discharge or not;							
		• Adits associated with mines or prospects with no documented production are listed only if adit(s) discharge.							
		• Because of limited field checking, the list may be incomplete with respect to discharging non-producer adits.							
		• No adits within the Bunker Hill Superfund site (Box) are listed with the exception of the Kellogg Tunnel.							
		• Adits that discharge during high flow (spring, early summer) may not have low flow discharge (fall, winter).							
		• Abbreviations:							
		SAIC = SAIC (1993a, b), for EPA							
		USFS = U.S. Forest Service, by IGS (Kauffman et al., 1999, v. 3 and 5)							
		URSG = URS Greiner (1998), for EPA							
		USGS = U.S. Geological Survey, Spokane (OFR 98-127)							
		BLM = U.S. Bureau of Land Management, Coeur d'Alene Field Office							
		CCJM = C.C. Johnson & Malhotra, P.C. (1998), for BLM							
		NPDES = U. S. EPA (E. Liverman)							
		BOM = U.S. Bureau of Mines (McNary et al. (1995) for East Fork Pine Ck; Paulson? et al. (199?) for Moon Creek)							
		IDEQ = Idaho Division of Environmental Quality							

Table A-13. Seeps Compilation.

RAP Reach	Date Source	Agency	Seep Name	Type	Other ID	Peer Reviewed	Sample Date	Flow (cfs)	Hardness (mg/L CaCO <sub>3</sub> )	Cd D (µg/L)	Cd T (µg/L)	Pb D (µg/L)	Pb T (µg/L)	Zn D (µg/L)	Zn T (µg/L)	Fe D (µg/L)	Fe T (µg/L)	Alkalinity (µg/L)	Sulfate (µg/L)	pH	
<b>Canyon Creek</b>																					
LCC	MFG 1991	SVNRT/EPA RI/FS	Star Ponds Discharge	NPDES	SPTP-1/CC-19	Yes	17-May-91	1.1		5.6	7.2	14	37	1420	1360					6.96	
LCC	MFG 1991	SVNRT/EPA RI/FS	Star Ponds Discharge	NPDES	SPTP-1/CC-19	Yes	5-Oct-91	0.94		6.4	6.6	11	37	1160	1230						
LCC	MFG 1991	SVNRT/EPA RI/FS	Woodland Park - seep	Floodplain	WP Seep-1/CC-20	Yes	5-Oct-91	0.02		390	396	1480	1590	3830	35,400					6.22	
LCC	Houck & Mink 1994	UOI	Woodland Park - seep	Floodplain	S-14	Yes	26-Sep-93				183		1880	1880	31,144						
LCC	CC EEE/CA	EPA	Woodland Park - seep	Floodplain	S-14	Yes	26-May-94			179	179	1031	1371	27200	29,867	143	11096				
LCC	URSG TDM	EPA RI/FS	Hecla-Star Tailings Ponds	?	CC-357	Yes	16-May-98	0.00378	106	51.5 J	52.9 J	41	198	9370	9720	600 J	1130 J	40,000	83,000	6.24	
<b>Ninemile Creek</b>																					
UEFN M	MFG 1991	SVNRT/EPA RI/FS	Interstate-Callahan Mine Seep	Waste Rock	IC-1/NM-362	Yes	15-May-91	4.27		0.2 U	0.2 U	3 U	3 U	20 U	20 U					7.81	
UEFN M	MFG 1991	SVNRT/EPA RI/FS	Interstate-Callahan Mine Seep	Waste Rock	IC-1/NM-362	Yes	4-Oct-91	2.37		0.3	0.7	0.1 U	1	73	169					6.69	
UEFN M	URSG TDM	EPA RI/FS	Interstate-Callahan Mine Seep	Waste Rock	NM-362	Yes	14-Nov-97	0.31		1.09	0.87	1.01	1.9	261	262	10 U	11.9 U	11,900	9,050		
UEFN M	URSG TDM	EPA RI/FS	Interstate-Callahan Mine Seep	Waste Rock	NM-362	Yes	13-May-98	0.186		0.44	0.41	2	1.1	122	115	20.1	14.4	9,100	2,900	6.52	
EFNM	OFR98-127	USGS	Interstate-Callahan Mill seep	Tailings		Yes	1-Nov-96	0.003	144	650	670	225	235	172,000	171,000	680	730	5,000	490,000	4.8	
EFNM	OFR98-127	USGS	Interstate-Callahan Mill seep	Tailings		Yes	1-Jun-97	0.007	120	680	682	386	405	179,500	181,500	135	310	4,500	410,000	4.6	
EFNM	URSG TDM	EPA RI/FS	Interstate Mill Site	Tailings	NM-363	Yes	14-Nov-97		350	1650	1520	810	1650	498,000	430,000 J	2970	16600	10,000 U	1,060,000		
EFNM	URSG TDM	EPA RI/FS	Interstate Mill Site	Tailings	NM-363	Yes	16-May-98	0.0038	260	1810 J	1810 J	271	270	532,000	540,000	4080 J	2220 J	1,100,000		8.94	
EFNM	Golder Assoc.	SVNRT	Spring #3 [I-C Mill area]	?		Yes		0.043			2 U	9		213						6.5	
EFNM	Golder Assoc.	SVNRT	Spring #1 [I-C Mill area]	?		Yes		0.0089			7	2 U		2160						6.09	
EFNM	Golder Assoc.	SVNRT	Spring #2 [I-C Mill area]	?		Yes		0.0056			442	3		102,000						4.97	
EFNM	Golder Assoc.	SVNRT	Tailings Seep [I-C Mill area]	Tailings		Yes		0.0033			863		284		376,000					882,000	3.77
EFNM	OFR98-127	USGS	Rex seep	Tailings		Yes	1-Nov-96	0.022	163	36	36	5.3	49	13,100	13,200	1260	2410	32,500	170,000	6.17	
EFNM	OFR98-127	USGS	Rex seep	Tailings		Yes	1-Jun-97	0.06	185	8.8	9.2	0.72	98	20,750	20,850	6350	12,500	42,000	190,000	6.66	
EFNM	URSG TDM	EPA RI/FS	Rex No. 2 (tailling seep)	Tailings?	NM-368	Yes	15-Nov-97	0.024	203	15.3	13.1	1.83	21.2	8330	8530 J	943	2320	32,800	198,000		
EFNM	URSG TDM	EPA RI/FS	Rex No. 2 (tailling seep)	Tailings?	NM-368	Yes	13-May-98	0.0207	25.7	17	15.9	98.9	113	3270	2900	41.9	94.4	12,000	25,000	5.77	
EFNM	OFR98-127	USGS	Success - lower seep	Tailings		Yes	1-Nov-96	0.002	55	140	143	930	932	24,200	24,300	10 U	10 U	12,000	85,000	6.11	
EFNM	OFR98-127	USGS	Success - lower seep	Tailings		Yes	1-Jun-97	0.044	34	82	81	515	525	13,600	14,100	10 U	10 U	11,500	49,000	6.29	
EFNM	E&E 1993	EPA	Success - upper seep	Tailings	T93050559	Yes	1-May-93			68.4		306 J		11,000					35,000	6.64	
EFNM	OFR98-127	USGS	Success - upper seep	Tailings		Yes	1-Nov-96	0.010	43	117	120	215	220	20,200	20,100	10 U	10 U	5,000	68,000	4.85	
EFNM	OFR98-127	USGS	Success - upper seep	Tailings		Yes	1-Jun-97	0.003	15	26	26	112	117	3760	3750	10 U	10	16,500	15,000	7.13	
EFNM	TerraGraphics 1998	DEQ	Success Mill Site			Yes	27-Apr-98				56		210		2200					6.64	
EFNM	TerraGraphics 1998	DEQ	Success Mill Site			Yes	27-Apr-98				40		93		2800					6.68	
EFNM	URSG TDM	EPA RI/FS	Success Mine Rock Dump	?	NM-374	Yes	17-May-98	0.00675	42.6	158 J	156 J	1370	1300 J	33900	34100	303 J	314 J	6,000	80,000	6.27	
<b>Pine Creek</b>																					
TPC	USBM	BLM	Highland Surprise	Dump/adit	S0003	Yes	1-Jun-93			48.5	ND	ND		3.51	521	482	9.9	27.8	31,000	35,400	7.50
TPC	USBM	BLM	Highland Surprise	Dump/adit	S0003	Yes	1-Aug-93			217	2.5	4.3	1.9	4.59	2070	2520	7.6	135	138,000	68,600	8.4
TPC	USBM	BLM	Highland Surprise	Dump	SPNEW	Yes	1-Jun-93			74.1	32.7	30.8	39.8	41.0	12,900	12,100	20.6	28.3	10,000	69,900	7.10
TPC	URSG TDM	EPA RI/FS	Highland Surprise Lower Rock Dump	Dump	PC-375	Yes	12-May-98	0.0106			17.3	16.5	29.6	40.7	6090	6210	20 U	47.2	35,800	60,700	6.4
TPC	CCJM98	BLM	Highland Surprise [lower rock dump]	Dump	HIL-SW-2	Yes	16-Jul-94			95.2		33.5		43.8		12,000 J		5.0 U		6.71	
TPC	CCJM98	BLM	Highland Surprise [lower rock dump]	Dump	HIL-SW-3	Yes	16-Jul-94			75.8		40.6		70.0		13,000 J		169		6.89	
TPC	USBM	BLM	Nevada-Stewart	Dump	SP010	Yes	1-Jun-93			168	4.1	4.4	3.11	3.58	3640	3310	81.5	89.1	46,000	129,000	7.10
TPC	USBM	BLM	Nevada-Stewart	Dump	SP010	Yes	1-Aug-93			154	3.2		1.3								

**Table A-13. Seeps Compilation.**

RAP Reach	Date Source	Agency	Seep Name	Type	Other ID	Peer Reviewed	Sample Date	Flow (cfs)	Hardness (mg/L CaCO <sub>3</sub> )	Cd D (µg/L)	Cd T (µg/L)	Pb D (µg/L)	Pb T (µg/L)	Zn D (µg/L)	Zn T (µg/L)	Fe D (µg/L)	Fe T (µg/L)	Alkalinity (µg/L)	Sulfate (µg/L)	pH		
EFPC	CCJM98	BLM	Denver Tailings	Tailings	DEN-SW-3	Yes	15-Jul-94		39.8		12		8.6		3690	J	5.0	U			6.83	
EFPC	USBM	BLM	Lookout Mountain	Dump	S0001	Yes	1-Jun-93		80.8	ND	ND	1.60	1.80	17.0	22.1	102	135	60,000	61,600	8.00		
EFPC	USBM	BLM	Lookout Mountain	Dump	S0001	Yes	1-Aug-93			ND	ND		28.3		ND		115,000	52,400	7.7			
EFPC	USBM	BLM	Lookout Mountain	Spring	SP001	Yes	1-Jun-93		65.9	ND	ND	ND	1.70	6.5	11.0	37.7	130	50,000	47,500	7.10		
EFPC	USBM	BLM	Lookout Mountain	Spring	SP001	Yes	1-Aug-93			ND	ND		ND	6.5		37.7		79,200	39,600	6.97		
MSPC	CCJM 98	BLM	Liberal King Millsite	Spring (below millsite)	LIB-SW-4	Yes	18-Jul-94		334		6.6		2.4		1430	J	5.0	U			6.94	
MSPC	URSG TDM	EPA RI/FS	North Amy	Spring?	PC-329	Yes	13-Nov-97	0.171		4.14	3.7	42.3	37.7	1410	1470	104	128	14,300				
MSPC	URSG TDM	EPA RI/FS	North Amy	Spring?	PC-329	Yes	12-May-98	0.68		1.3	1.2	7.6	11.8	301	306	20	U	23.5	14,800	5520	6	
<b>South Fork Coeur d'Alene</b>																						
USFCDR	URSG TDM	EPA RI/FS	Morning No.6	Dump	SF-328	Yes	8-Nov-97	1.04	580	0.67	0.64	7.42	7.1	88.6	110	1.04	10	U	228,000	319,000		
USFCDR	URSG TDM	EPA RI/FS	Morning No.6	Dump	SF-328	Yes	17-May-98	2.37	544	1.1	3.6	7.7	11.9	115	121	2.37	41	203,000	326,000	8.19		
MSFCDR	IGS	USFS	Oskis [Vienna]	Dump	K09029703	Yes	2-Sep-97			4.8	3.0	U		ND	2.5	U	3.0	U	13	12	U	
MSFCDR	Osburn Response	SVNRT	Osburn Flats - misc. seep	Floodplain	SW-OSB-4-6	Yes	26-Mar-97			77.7		272		8370							5.8	
MSFCDR	OFR98-127	USGS	Osburn Flats - misc. seep	Floodplain		Yes	1-Jun-97	0.06	99	38	39	1.8	2.3	4720	4960	10	U	15	52,000	56,000	6.62	
LSFCDR	OFR98-127	USGS	Bunker Hill - lower seep	Tailings?		Yes	1-Nov-96	1.71	337	32	33	35	112	10,080	10,110	2120	3450	36,500	330,000	6.05		
LSFCDR	OFR98-127	USGS	Bunker Hill - upper seep	Tailings?		Yes	1-Nov-96	0.11	399	33	33	123	135	20,150	20,060	21,200	21,400	26,500	440,000	5.69		
LSFCDR	Dames & Moore	EPA "Box"	CIA Seep #1	Tailings		Yes	27-Sep-87	1.66	583	4	U	4	8	15	10,300	10,100	17,100	17,900	40,600	602,000	6.2	
LSFCDR	Dames & Moore	EPA "Box"	CIA Seep #1	Tailings		Yes	4-Dec-87	0.68	277	4	U	4	25	5	U	4940	5080	7740	8140	43,800	235,000	6.1
LSFCDR	Dames & Moore	EPA "Box"	CIA Seep #1	Tailings		Yes	20-Apr-88	1.33	786	7	8	25	U	5	U	17,100	16,000	19,800	19,500	36,000	791,000	6.2
LSFCDR	Dames & Moore	EPA "Box"	CIA Seep #1	Tailings		Yes	14-May-88	1.68	831	9	7	5	U	5	U	17,150	15,800	19,500	18,900	38,000	830,000	6.1
LSFCDR	Dames & Moore	EPA "Box"	CIA Seep #1	Tailings		Yes	19-May-88	0.91	893	5	5	5	U	5	U	18,000	16,600	22,400	21,700	46,000	872,000	6.2
LSFCDR	Dames & Moore	EPA "Box"	CIA Seep #2	Tailings		Yes	27-Sep-87	3.33	600	4	6	6	19	22,100	21,600	27,300	29,400	30,500	591,000	6.0		
LSFCDR	Dames & Moore	EPA "Box"	CIA Seep #2	Tailings		Yes	4-Dec-87	2.24	456	7	4	25	U	25	U	19,400	19,900	22,000	23,000	31,700	519,000	6.1

**Changes to RAP tables, February 11, 2000:**

- Table A-2: Removed the volume estimate for polygon OSB044, Success mine; clarified the “Comments” entry to read “Some waste rock on tailings pile, no volume estimate of waste rock.”
- Table A-2: Added a volume estimate (99,391 cy) for polygon BUR051, Sunset Mine.
- Table 2: Changed entries under “Waste Rock” for Upper EF Ninemile Creek (790,000 cy instead of 690,000 cy) and for East Fork Ninemile Creek (1,000,000 cy instead of 1,600,000 cy).
- Table 3: Changed entries under “Waste Rock” to reflect the changes in Table 2.

**Changes to RAP tables, June 21, 2000:**

- Table A-5 Rev. 1, under Considered Remediated: The TOTAL entry for area (bottom of the page) is incorrect, although the individual entries are correct. The total should read “139.14” rather than “123.73”.
- Table A-6 Rev. 1, under Piles & Impoundments, entry NM-P03 (Success Mine “rock dump”): the Tailings volume columns (both minimum and maximum) should read “200,000” instead of “203,000”, and the Comments column should read “Waste rock over tailings; bulk of pile thought to be tailings” instead of “Waste rock over tailings; volume estimate includes tailings + millsite soils but not waste rock.”
- Table A-6 Rev. 1, under Mill Sites, entry NM-M01: the Name/Location column should read “Success No. 3 and mill site” instead of “Success No. 3”; the Depth min (ft) and max (ft) columns should be left blank; the Tailings volume columns (both minimum and maximum) should read “3,000” instead of “218” and “1742.4” respectively; and the Reference column should read “BLM98, NRDA 96” instead of “BLM 98.”

**Changes to RAP tables, November 21, 2000:**

- Table A-7 Rev. 1, under Piles & Impoundments, entry PC-P01 (Upper Constitution tailings): the Comments column should read “361 cy removed and taken to CIA in 1998 (Fortier 99),” instead of “361,000 cy taken to CIA in 1998 (Fortier 99).”
- Table A-7 Rev. 1, under Mill Sites, entry PC-M02 [Red Cloud (Sidney) Mill (on Highland & Red Cloud Cks)]: the Comments column should read: “No visible tailings; samples are labelled “dump” (McN 95). Some evidence of concentrate; 2,000 c.y. removed by BLM in 1998 (CCJM 98). 688 cy removed in 1998 around mill foundations and taken to the CIA (Fortier 99).”
- Table A-10 Rev.1: “Upper Constitution tailings” entry should read “361 cy” instead of “361,000 cy”; insert a new entry for Red Cloud mill tailings (688 cy); and total should now read “24,243,811 cy Rounded as: 24,200,000 cy” instead of “24,603,762 cy Rounded as: 24,600,000 cy.”
- Table 2: Changed entries under “Impoundments” for Lower South Fork (27,000,000 cy instead of 28,000,000 cy).
- Table 3: Changed entries under “Impoundments” to reflect the change in Table 2.